

TABLE 9.0

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Adolescent (Ages 9-18)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Surface Soil/Sludge	Lagoon 1	Benzo(a)pyrene	3E-08	--	5E-08	8E-08	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Dioxin TEQ	2E-06	--	5E-07	2E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	--	N/A	Antimony	Blood	2E-03	--	--	2E-03
			Arsenic	1E-06	--	3E-07	1E-06	Arsenic	Skin	2E-02	--	5E-03	2E-02
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	3E-03	--	3E-03	6E-03
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	5E-01	--	--	5E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	5E-03	--	--	6E-03
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	7E-03	--	--	7E-03
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	6E-02	--	--	6E-02
			(total)	3E-06	--	9E-07	4E-06	(Total)		6E-01	--	8E-03	6E-01
Surface Water	Surface Water	Lagoon 1	Arsenic	--	--	5E-09	5E-09	Arsenic	Skin	--	--	8E-05	8E-05
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	1E-02	1E-02
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	2E-04	2E-04
			Thallium	--	--	N/A	N/A	Thallium	NOAEL	--	--	2E-04	2E-04
			(total)	--	--	5E-09	5E-09	(Total)		--	--	1E-02	1E-02

-- = Not Evaluated
N/A = Not Applicable

Total Risk Across Surface Soil/Sludge	4E-06
Total Risk Across Surface Water	5E-09
Total Risk Across All Media and All Exposure Routes	4E-06

Total Hazard Index Across All Media and All Exposure Routes	6E-01
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Total Skin HI =	2E-02
Total Nervous System HI =	2E-02
Total Immune System HI =	2E-04
Total Kidney HI =	6E-03
Total Blood HI =	2E-03
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.1.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Adolescent (Ages 9-18)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soils	Surface Soil/ Sludge	Lagoon 1	Benzo(a)pyrene	4E-09	--	1E-08	2E-08	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A		
			Dioxin TEQ	5E-08	--	3E-08	9E-08	Dioxin TEQ	N/A	N/A	--	N/A	N/A		
			Antimony	N/A	--	--	N/A	Antimony	Blood	5E-04	--	--	5E-04		
			Arsenic	1E-07	--	8E-08	2E-07	Arsenic	Skin	4E-03	--	3E-03	6E-03		
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	2E-04	--	5E-04	8E-04		
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	4E-02	--	--	4E-02		
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E-03	--	--	1E-03		
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	5E-04	--	--	5E-04		
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	6E-03	--	--	6E-03		
(total)				2E-07	--	1E-07	3E-07	(Total)				5E-02	--	3E-03	5E-02
Surface Water	Surface Water	Lagoon 1	Arsenic	--	--	9E-10	9E-10	Arsenic	Skin	--	--	3E-05	3E-05		
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	4E-03	4E-03		
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	6E-05	6E-05		
			Thallium	--	--	N/A	N/A	Thallium	NOAEL	--	--	7E-05	7E-05		
			(total)				--	--	9E-10	9E-10	(Total)				--
Total Risk Across Surface Soil/Sludge						3E-07	Total Hazard Index Across All Media and All Exposure Routes						6E-02		

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI = 6E-03

Total Nervous System HI = 5E-03

Total Immune System HI = 6E-05

Total Kidney HI = 8E-04

Total Blood HI = 5E-04

Total Growth HI = N/A

Total Liver HI = N/A

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Adolescent (Ages 9-18)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Surface Soil/Sludge	Lagoon 2	Dioxin TEQ	2E-06	--	7E-07	3E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	3E-07	--	1E-07	4E-07	Arsenic	Skin	5E-03	--	2E-03	7E-03
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	1E-03	--	1E-03	2E-03
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	1E-01	--	--	1E-01
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	5E-05	--	--	5E-05
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E-02	--	--	1E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	5E-03	--	--	5E-03
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	8E-03	--	--	8E-03
			(total)	2E-06	--	8E-07	3E-06	(Total)		1E-01	--	3E-03	1E-01
Surface Water	Surface Water	Lagoon 2	Dioxin TEQ	--	--	4E-07	4E-07	Dioxin TEQ	N/A	--	--	N/A	N/A
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	8E-03	8E-03
			(total)	--	--	4E-07	4E-07	(Total)		--	--	8E-03	8E-03
Total Risk Across Surface Soil/Sludge							3E-06	Total Hazard Index Across All Media and All Exposure Routes					1E-01
Total Risk Across Surface Water							4E-07						
Total Risk Across All Media and All Exposure Routes							4E-06						
								Total Skin HI =					7E-03
-- = Not Evaluated													
N/A = Not Applicable													

-- = Not Evaluated
N/A = Not Applicable

Total Skin HI =	7E-03
Total Nervous System HI =	2E-02
Total Immune System HI =	N/A
Total Kidney HI =	2E-03
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.2.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Adolescent (Ages 9-18)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Surface Soil/ Sludge	Lagoon 2	Dioxin TEQ	3E-07	--	2E-07	4E-07	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	4E-08	--	3E-08	7E-08	Arsenic	Skin	1E-03	--	8E-04	2E-03
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	3E-04	--	6E-04	9E-04
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	3E-02	--	--	3E-02
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	2E-06	--	--	2E-06
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	3E-03	--	--	3E-03
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	5E-04	--	--	5E-04
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	2E-03	--	--	2E-03
			(total)	3E-07	--	2E-07	5E-07	(Total)		3E-02	--	1E-03	3E-02
Surface Water	Surface Water	Lagoon 2	Dioxin TEQ	--	--	8E-08	8E-08	Dioxin TEQ	N/A	--	--	N/A	N/A
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	3E-03	3E-03
			(total)	--	--	8E-08	8E-08	(Total)		--	--	3E-03	3E-03
Total Risk Across Surface Soil/Sludge						5E-07	Total Hazard Index Across All Media and All Exposure Routes						4E-02

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across Surface Water
Total Risk Across All Media and All Exposure Routes

Total Skin HI =	2E-03
Total Nervous System HI =	6E-03
Total Immune System HI =	N/A
Total Kidney HI =	9E-04
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Adolescent (Ages 9-18)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Surface Soil/ Sludge	Lagoon 3	Dioxin TEQ	9E-07	--	3E-07	1E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	7E-07	--	2E-07	1E-06	Arsenic	Skin	1E-02	--	4E-03	2E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	3E-02	--	--	3E-02
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	5E-03	--	--	5E-03
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	2E-02	--	--	2E-02
			(total)	2E-06	--	5E-07	2E-06	(Total)		6E-02	--	4E-03	7E-02
Surface Water	Surface Water	Lagoon 3	No samples				No samples						
			(total)	--	--	--	N/A	(Total)		--	--	--	N/A
Total Risk Across Surface Soil/Sludge							2E-06	Total Hazard Index Across All Media and All Exposure Routes					7E-02

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	2E-02
Total Nervous System HI =	2E-02
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.3.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Adolescent (Ages 9-18)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Surface Soil/ Sludge	Lagoon 3	Dioxin TEQ	3E-08	--	2E-08	4E-08	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	6E-08	--	4E-08	1E-07	Arsenic	Skin	2E-03	--	1E-03	3E-03
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	4E-03	--	--	4E-03
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	9E-04	--	--	9E-04
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	9E-04	--	--	9E-04
			(total)	9E-08	--	6E-08	1E-07	(Total)		8E-03	--	1E-03	9E-03
Surface Water	Surface Water	Lagoon 3	No samples				No samples						
			(total)	--	--	--	N/A	(Total)		--	--	--	N/A
Total Risk Across Surface Soil/Sludge							1E-07	Total Hazard Index Across All Media and All Exposure Routes					9E-03

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	3E-03
Total Nervous System HI =	2E-03
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.4.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Current
 Receptor Population: Trespasser
 Receptor Age: Adolescent (Ages 9-18)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Surface Soil/ Sludge	Lagoon 4	Benzo(a)anthracene	8E-09	--	1E-08	2E-08	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	8E-08	--	1E-07	2E-07	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	8E-09	--	1E-08	2E-08	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	8E-08	--	1E-07	2E-07	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	8E-09	--	1E-08	2E-08	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A
			Dioxin TEQ	6E-06	--	2E-06	8E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	3E-07	--	1E-07	4E-07	Arsenic	Skin	5E-03	--	2E-03	6E-03
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	6E-03	--	7E-03	1E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	6E-01	--	--	6E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	4E-03	--	--	4E-03
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	7E-03	--	--	7E-03
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	3E-02	--	--	3E-02
			(total)	6E-06	--	2E-06	9E-06	(Total)		6E-01	--	9E-03	6E-01
			Surface Water	Surface Water	Lagoon 4	Dioxin TEQ	--	--	3E-08	3E-08	Dioxin TEQ	N/A	--
Manganese	--	--				N/A	N/A	Manganese	Nervous System	--	--	1E-02	1E-02
Mercury	--	--				N/A	N/A	Mercury	Immune System	--	--	1E-04	1E-04
(total)	--	--				3E-08	3E-08	(Total)		--	--	1E-02	1E-02
Total Risk Across Surface Soil/Sludge						9E-06	Total Hazard Index Across All Media and All Exposure Routes						6E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI = 6E-03

Total Nervous System HI = 2E-02

Total Immune System HI = 1E-04

Total Kidney HI = 1E-02

Total Blood HI = N/A

Total Growth HI = N/A

Total Liver HI = N/A

TABLE 9.4.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Adolescent (Ages 9-18)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Surface Soil/ Sludge	Lagoon 4	Benzo(a)anthracene	1E-09	--	3E-09	4E-09	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	1E-08	--	3E-08	4E-08	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	1E-09	--	3E-09	4E-09	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	1E-08	--	3E-08	4E-08	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	1E-09	--	3E-09	4E-09	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A
			Dioxin TEQ	2E-07	--	1E-07	3E-07	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	4E-08	--	3E-08	6E-08	Arsenic	Skin	1E-03	--	8E-04	2E-03
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	2E-03	--	3E-03	5E-03
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	1E-01	--	--	1E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	9E-04	--	--	9E-04
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	2E-03	--	--	2E-03
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	7E-03	--	--	7E-03
			(total)	2E-07	--	2E-07	4E-07	(Total)		2E-01	--	4E-03	2E-01
Surface Water	Surface Water	Lagoon 4	Dioxin TEQ	--	--	7E-09	7E-09	Dioxin TEQ	N/A	--	--	N/A	N/A
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	2E-03	2E-03
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	2E-05	2E-05
			(total)	--	--	7E-09	7E-09	(Total)		--	--	2E-03	2E-03
Total Risk Across Surface Soil/Sludge						4E-07	Total Hazard Index Across All Media and All Exposure Routes						2E-01

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media and All Exposure Routes

4E-07
7E-09
5E-07

Total Skin HI =	2E-03
Total Nervous System HI =	4E-03
Total Immune System HI =	2E-05
Total Kidney HI =	5E-03
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Adolescent (Ages 9-18)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Surface Soil/ Sludge	Lagoon 5	Benzo(a)pyrene	2E-08	--	3E-08	6E-08	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Pentachlorophenol	4E-08	--	1E-07	1E-07	Pentachlorophenol	Kidney	8E-05	--	2E-04	3E-04
			Dioxin TEQ	2E-05	--	6E-06	2E-05	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	--	N/A	Antimony	Blood	1E-02	--	--	1E-02
			Arsenic	3E-07	--	8E-08	3E-07	Arsenic	Skin	4E-03	--	1E-03	5E-03
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	1E-02	--	1E-02	3E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	2E+00	--	--	2E+00
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E-02	--	--	1E-02
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	8E-02	--	--	6E-02
			(total)	2E-05	--	6E-06	2E-05	(Total)		2E+00	--	2E-02	2E+00
Surface Water	Surface Water	Lagoon 5	Dioxin TEQ	--	--	3E-07	3E-07	Dioxin TEQ	N/A	--	--	N/A	N/A
			Chromium	--	--	N/A	N/A	Chromium	NOAEL	--	--	1E-05	1E-05
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	3E-03	3E-03
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	1E-04	1E-04
			(total)	--	--	3E-07	3E-07	(Total)		--	--	3E-03	3E-03
Total Risk Across Surface Soil/Sludge						2E-05	Total Hazard Index Across All Media and All Exposure Routes						2E+00
Total Risk Across Surface Water						3E-07							
Total Risk Across All Media and All Exposure Routes						2E-05	Total Skin HI =						5E-03
-- = Not Evaluated													
N/A = Not Applicable													

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	6E-03
Total Nervous System HI =	2E-02
Total Immune System HI =	1E-04
Total Kidney HI =	3E-02
Total Blood HI =	1E-02
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.5.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Adolescent (Ages 9-18)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Surface Soil/ Sludge	Lagoon 5	Benzo(a)pyrene	3E-09	--	9E-09	1E-08	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Pentachlorophenol	2E-09	--	8E-09	1E-08	Pentachlorophenol	Kidney	8E-06	--	3E-05	4E-05
			Dioxin TEQ	1E-06	--	7E-07	2E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	--	N/A	Antimony	Blood	1E-03	--	--	1E-03
			Arsenic	2E-08	--	1E-08	3E-08	Arsenic	Skin	5E-04	--	4E-04	9E-04
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	8E-04	--	2E-03	3E-03
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	1E-01	--	--	1E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E-03	--	--	1E-03
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	1E-02	--	--	1E-02
			(total)	1E-06	--	7E-07	2E-06	(Total)		1E-01	--	2E-03	1E-01
Surface Water	Surface Water	Lagoon 5	Dioxin TEQ	--	--	7E-08	7E-08	Dioxin TEQ	N/A	--	--	N/A	N/A
			Chromium	--	--	N/A	N/A	Chromium	NOAEL	--	--	4E-06	4E-06
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	9E-04	9E-04
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	3E-05	3E-05
			(total)	--	--	7E-08	7E-08	(Total)		--	--	1E-03	1E-03
Total Risk Across Surface Soil/Sludge							2E-06	Total Hazard Index Across All Media and All Exposure Routes					1E-01
Total Risk Across Surface Water							7E-08						
Total Risk Across All Media and All Exposure Routes							2E-06	Total Skin HI =					9E-04
-- = Not Evaluated													
N/A = Not Applicable													

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	9E-04
Total Nervous System HI =	2E-03
Total Immune System HI =	3E-05
Total Kidney HI =	3E-03
Total Blood HI =	1E-03
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Adolescent (Ages 9-18)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Warehouse Area	Benzo(a)anthracene	3E-08	--	4E-08	7E-08	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	2E-07	--	3E-07	6E-07	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	3E-08	--	4E-08	6E-08	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	3E-08	--	4E-08	7E-08	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Dioxin TEQ	8E-08	--	2E-08	1E-07	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	5E-07	--	2E-07	6E-07	Arsenic	Skin	7E-03	--	2E-03	1E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	1E-02	--	--	1E-02
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	6E-03	--	--	6E-03
			(total)	9E-07	--	6E-07	2E-06	(Total)		2E-02	--	2E-03	3E-02
Total Risk Across All Media and All Exposure Routes						2E-06	Total Hazard Index Across All Media and All Exposure Routes						3E-02

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E-02
Total Nervous System HI =	6E-03
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.6.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Adolescent (Ages 9-18)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Warehouse Area	Benzo(a)anthracene	1E-09	--	3E-09	5E-09	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	1E-08	--	3E-08	4E-08	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	1E-09	--	3E-09	5E-09	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	3E-09	--	9E-09	1E-08	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Dioxin TEQ	9E-09	--	6E-09	2E-08	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	6E-08	--	4E-08	1E-07	Arsenic	Skin	2E-03	--	1E-03	3E-03
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	2E-03	--	--	2E-03
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E-03	--	--	1E-03
			(total)	9E-08	--	9E-08	2E-07	(Total)		6E-03	--	1E-03	7E-03
Total Risk Across All Media and All Exposure Routes						2E-07	Total Hazard Index Across All Media and All Exposure Routes						7E-03

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	3E-03
Total Nervous System HI =	1E-03
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.7.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Recreational Visitor
Receptor Age: Adolescent (Ages 9-18)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Hoosic River	Benzo(a)anthracene	1E-08	--	2E-08	3E-08	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	6E-08	--	8E-09	1E-07	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	1E-08	--	1E-08	2E-08	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	5E-08	--	7E-08	1E-07	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	5E-09	--	7E-09	1E-08	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A
			Phenanthrene	N/A	--	N/A	N/A	Phenanthrene	Body Weight	8E-06	--	1E-05	2E-05
			Aroclor 1254	4E-09	--	6E-09	1E-08	Aroclor 1254	Immune System	7E-04	--	1E-03	2E-03
			Aroclor 1260	2E-09	--	3E-09	6E-09	Aroclor 1260	Immune System	4E-04	--	6E-04	1E-03
			PCB TEQ	2E-05	--	8E-06	3E-05	PCB TEQ	N/A	N/A	--	N/A	N/A
			Dioxin TEQ	3E-07	--	1E-07	6E-07	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	2E-07	--	8E-08	3E-07	Arsenic	Skin	4E-03	--	1E-03	5E-03
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	2E-03	--	--	2E-03
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	2E-03	--	--	2E-03
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	1E-03	--	--	1E-03
			(total)	2E-05	--	8E-06	3E-05	(Total)		1E-02	--	3E-03	1E-02
Surface Water	Surface Water	Hoosic River	Dioxin TEQ	1E-08	--	2E-08	2E-08	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	N/A	Manganese	Nervous System	6E-03	--	1E-02	2E-02
			Mercury	N/A	--	N/A	N/A	Mercury	Immune System	5E-05	--	6E-05	1E-04
			(total)	1E-08	--	2E-08	2E-08	(Total)		6E-03	--	1E-02	2E-02
Total Risk Across Sediment						3E-05	Total Hazard Index Across All Media and All Exposure Routes						3E-02
Total Risk Across Surface Water						2E-06							
Total Risk Across All Media and All Exposure Routes						3E-05	Total Skin HI =						5E-03
-- = Not Evaluated													
N/A = Not Applicable													

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	6E-03
Total Nervous System HI =	2E-02
Total Immune System HI =	3E-03
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.7.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Recreational Visitor
Receptor Age: Adolescent (Ages 9-18)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Hoosic River	Benzo(a)anthracene	2E-09	--	6E-09	8E-09	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	1E-08	--	3E-08	4E-08	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	2E-09	--	5E-09	7E-09	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	8E-09	--	2E-08	3E-08	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	9E-10	--	2E-09	3E-09	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A
			Phenanthrene	N/A	--	N/A	N/A	Phenanthrene	Body Weight	3E-06	--	8E-06	1E-05
			Aroclor 1254	7E-10	--	2E-09	3E-09	Aroclor 1254	Immune System	2E-04	--	7E-04	1E-03
			Aroclor 1260	4E-10	--	1E-09	1E-09	Aroclor 1260	Immune System	1E-04	--	4E-04	5E-04
			PCB TEQ	4E-06	--	3E-06	6E-06	PCB TEQ	N/A	N/A	--	N/A	N/A
			Dioxin TEQ	7E-09	--	4E-09	1E-08	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	4E-08	--	3E-08	7E-08	Arsenic	Skin	1E-03	--	8E-04	2E-03
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	6E-04	--	--	6E-04
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	6E-04	--	--	6E-04
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	4E-04	--	--	4E-04
			(total)	4E-06	--	3E-06	7E-06	(Total)		3E-03	--	2E-03	5E-03
Surface Water	Surface Water	Hoosic River	Dioxin TEQ	2E-10	--	3E-07	3E-07	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	N/A	Manganese	Nervous System	2E-04	--	4E-04	6E-04
			Mercury	N/A	--	N/A	N/A	Mercury	Immune System	6E-06	--	8E-06	1E-05
			(total)	2E-10	--	3E-07	3E-07	(Total)		2E-04	--	4E-04	6E-04
Total Risk Across Sediment							7E-06	Total Hazard Index Across All Media and All Exposure Routes					5E-03
Total Risk Across Surface Water							3E-07						
Total Risk Across All Media and All Exposure Routes							7E-06						
								Total Skin HI =					2E-03
-- = Not Evaluated													
N/A = Not Applicable													

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	2E-03
Total Nervous System HI =	2E-03
Total Immune System HI =	1E-03
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Park Visitor
Receptor Age: Young Child (Ages 1-6yAdult)

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soils	Soil/Sludge	Lagoon 1	1,2-Dichlorobenzene	N/A	--	--	N/A	1,2-Dichlorobenzene	NOAEL	2E-04	--	--	2E-04		
			1,2-Dichloroethane	1E-08	--	--	1E-08	1,2-Dichloroethane	N/A	4E-05	--	--	4E-05		
			1,3-Dichlorobenzene	N/A	--	--	N/A	1,3-Dichlorobenzene	N/A	9E-04	--	--	9E-04		
			1,4-Dichlorobenzene	4E-09	--	--	4E-09	1,4-Dichlorobenzene	N/A	5E-05	--	--	5E-05		
			Benzene	6E-09	--	--	6E-09	Benzene	N/A	3E-04	--	--	3E-04		
			Bromodichloromethane	9E-09	--	--	9E-09	Bromodichloromethane	Kidney	6E-05	--	--	6E-05		
			Carbon tetrachloride	2E-08	--	--	2E-08	Carbon tetrachloride	Liver	2E-03	--	--	2E-03		
			Chlorobenzene	N/A	--	--	N/A	Chlorobenzene	Liver	7E-05	--	--	7E-05		
			Chloroform	9E-10	--	--	9E-10	Chloroform	Liver	1E-04	--	--	1E-04		
			Tetrachloroethylene	7E-09	--	--	7E-09	Tetrachloroethylene	Liver	1E-04	--	--	1E-04		
			Trichloroethene	1E-09	--	--	1E-09	Trichloroethene	N/A	1E-04	--	--	1E-04		
			Xylene (total)	N/A	--	--	N/A	Xylene (total)	Nervous System	5E-05	--	--	5E-05		
			2-Methylnaphthalene	N/A	--	--	N/A	2-Methylnaphthalene	Body Weight	1E-03	--	--	1E-03		
			4-Methylphenol	N/A	--	--	N/A	4-Methylphenol	Nervous System	5E-03	--	--	5E-03		
			Benzo(a)anthracene	7E-07	--	4E-07	1E-06	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A		
			Benzo(a)pyrene	7E-06	--	4E-06	1E-05	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A		
			Naphthalene	N/A	--	N/A	N/A	Naphthalene	Body Weight	5E-03	--	3E-03	7E-03		
			Pentachlorophenol	2E-05	--	2E-05	4E-05	Pentachlorophenol	Kidney	4E-03	--	4E-03	9E-03		
			Dieldrin	5E-08	--	--	5E-08	Dieldrin	Liver	5E-04	--	--	5E-04		
			Dioxin TEQ	9E-04	--	1E-04	1E-03	Dioxin TEQ	N/A	N/A	--	N/A	N/A		
			Antimony	N/A	--	--	N/A	Antimony	Blood	3E-02	--	--	3E-02		
			Arsenic	6E-06	--	6E-07	7E-06	Arsenic	Skin	1E-01	--	1E-02	1E-01		
			Barium	N/A	--	--	N/A	Barium	NOAEL	2E-02	--	--	2E-02		
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	9E-02	--	4E-02	1E-01		
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	4E+01	--	--	4E+01		
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	2E-04	--	--	2E-04		
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	3E-02	--	--	3E-02		
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	3E+00	--	--	3E+00		
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	5E-01	--	--	5E-01		
					(total)	9E-04	--	1E-04	1E-03	(Total)	5E+01	--	6E-02	5E+01	
Surface Water	Surface Water	Lagoon 1	Arsenic	--	--	3E-08	3E-08	Arsenic	Skin	--	--	3E-04	3E-04		
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	3E-02	3E-02		
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	5E-04	5E-04		
			Thallium	--	--	N/A	N/A	Thallium	NOAEL	--	--	6E-04	6E-04		
			(total)	--	--	3E-08	3E-08	(Total)	--	--	4E-02	4E-02			
Total Risk Across Soil/Sludge							1E-03	Total Hazard Index Across All Media and All Exposure Routes							5E+01
Total Risk Across Surface Water							3E-08								
Total Risk Across All Media and All Exposure Routes							1E-03								
								Total Skin HI =							1E-01
-- = Not Evaluated															
N/A = Not Applicable															

-- = Not Evaluated
N/A = Not Applicable

Total Skin HI =	1E-01
Total Nervous System HI =	4E+00
Total Immune System HI =	5E-04
Total Kidney HI =	1E-01
Total Blood HI =	3E-02
Total Growth HI =	N/A
Total Liver HI =	2E-03

TABLE 2.8.0T
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Park Visitor
Receptor Age: Young Child (Age 1-5)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sediment	Lagoon 1	1,2-Dichlorobenzene	N/A	--	--	N/A	1,2-Dichlorobenzene	NOAEL	4E-05	--	--	4E-05
			1,2-Dichloroethane	1E-09	--	--	1E-09	1,2-Dichloroethane	N/A	1E-05	--	--	1E-05
			1,3-Dichlorobenzene	N/A	--	--	N/A	1,3-Dichlorobenzene	N/A	2E-04	--	--	2E-04
			1,4-Dichlorobenzene	3E-10	--	--	3E-10	1,4-Dichlorobenzene	N/A	1E-05	--	--	1E-05
			Benzene	5E-10	--	--	5E-10	Benzene	N/A	7E-05	--	--	7E-05
			Bromodichloromethane	7E-10	--	--	7E-10	Bromodichloromethane	Kidney	1E-05	--	--	1E-05
			Carbon tetrachloride	1E-09	--	--	1E-09	Carbon tetrachloride	Liver	4E-04	--	--	4E-04
			Chlorobenzene	N/A	--	--	N/A	Chlorobenzene	Liver	2E-05	--	--	2E-05
			Chloroform	7E-11	--	--	7E-11	Chloroform	Liver	3E-05	--	--	3E-05
			Tetrachloroethylene	6E-10	--	--	6E-10	Tetrachloroethylene	Liver	3E-05	--	--	3E-05
			Trichloroethene	6E-11	--	--	6E-11	Trichloroethene	N/A	3E-05	--	--	3E-05
			Xylene (total)	N/A	--	--	N/A	Xylene (total)	Nervous System	1E-05	--	--	1E-05
			2-Methylnaphthalene	N/A	--	--	N/A	2-Methylnaphthalene	Body Weight	4E-04	--	--	4E-04
			4-Methylphenol	N/A	--	--	N/A	4-Methylphenol	Nervous System	1E-03	--	--	1E-03
			Benzo(a)anthracene	6E-08	--	6E-08	1E-07	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	6E-07	--	6E-07	1E-05	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Naphthalene	N/A	--	N/A	N/A	Naphthalene	Body Weight	1E-03	--	1E-03	3E-03
			Pentachlorophenol	1E-07	--	3E-07	5E-07	Pentachlorophenol	Kidney	1E-03	--	2E-03	3E-03
			Dieldrin	4E-09	--	--	4E-09	Dieldrin	Liver	1E-04	--	--	1E-04
			Dioxin TEQ	1E-05	--	3E-06	1E-05	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	--	N/A	Antimony	Blood	9E-03	--	--	9E-03
			Arsenic	5E-07	--	1E-07	6E-07	Arsenic	Skin	3E-02	--	7E-03	4E-02
			Barium	N/A	--	--	N/A	Barium	NOAEL	6E-03	--	--	6E-03
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	2E-02	--	2E-02	4E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	1E+01	--	--	1E+01
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	6E-05	--	--	6E-05
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	6E-03	--	--	6E-03
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	1E-01	--	--	1E-01
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	1E+01	--	--	1E+01
			(total)	1E-05	--	4E-06	2E-05	(Total)		1E+01	--	3E-02	1E+01
Surface Water	Surface Water	Lagoon 1	Arsenic	--	--	2E-09	2E-09	Arsenic	Skin	--	--	6E-05	6E-05
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	9E-03	9E-03
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	1E-04	1E-04
			Thallium	--	--	N/A	N/A	Thallium	NOAEL	--	--	2E-04	2E-04
			(total)	--	--	2E-09	2E-09	(Total)		--	--	9E-03	9E-03

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across Soil/Sediment
Total Risk Across Surface Water
Total Risk Across All Media and All Exposure Routes

2E-05
2E-09
2E-05

Total Hazard Index Across All Media and All Exposure Routes

1E+01

Total Skin HI = 4E-02
Total Nervous System HI = 1E-01
Total Immune System HI = 1E-04
Total Kidney HI = 4E-02
Total Blood HI = 9E-03
Total Growth HI = N/A
Total Liver HI = 6E-04

TABLE 9.9.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Park Visitor
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child								
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total				
Soils	Soil/Sludge	Lagoon 2	Acetophenone	N/A	--	--	N/A	Acetophenone	NOAEL	3E-06	--	--	3E-06				
			Dioxin TEQ	1E-05	--	1E-06	1E-05	Dioxin TEQ	N/A	N/A	--	N/A	N/A				
			Arsenic	3E-06	--	4E-07	4E-06	Arsenic	Skin	6E-02	--	8E-03	7E-02				
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	9E-03	--	4E-03	1E-02				
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	8E-01	--	--	8E-01				
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	4E-04	--	--	4E-04				
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E-01	--	--	1E-01				
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	2E-02	--	--	2E-02				
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	9E-02	--	--	9E-02				
(total)				2E-05	--	2E-06	2E-05	(Total)				1E+00	--	1E-02	1E+00		
Surface Water	Surface Water	Lagoon 2	Dioxin TEQ	--	--	2E-06	2E-06	Dioxin TEQ	N/A	--	--	N/A	N/A				
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	2E-02	2E-02				
			(total)	--	--	2E-06	2E-06	(Total)	--	--	2E-02	2E-02					
Total Risk Across Soil/Sludge							2E-05		Total Hazard Index Across All Media and All Exposure Routes							1E+00	

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media and All Exposure Routes

Total Skin HI =	7E-02
Total Nervous System HI =	1E-01
Total Immune System HI =	N/A
Total Kidney HI =	1E-02
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.9.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Park Visitor
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 2	Acetophenone	N/A	--	--	N/A	Acetophenone	NOAEL	8E-07	--	--	8E-07
			Dioxin TEQ	9E-07	--	2E-07	1E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	3E-07	--	7E-08	3E-07	Arsenic	Skin	1E-02	--	4E-03	2E-02
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	2E-03	--	2E-03	4E-03
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	2E-01	--	--	2E-01
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	9E-05	--	--	9E-05
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	2E-02	--	--	2E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	4E-03	--	--	4E-03
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	2E-02	--	--	2E-02
			(total)	1E-06	--	3E-07	2E-06	(Total)		3E-01	--	6E-03	3E-01
Surface Water	Surface Water	Lagoon 2	Dioxin TEQ	--	--	2E-07	2E-07	Dioxin TEQ	N/A	--	--	N/A	N/A
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	6E-03	6E-03
			(total)	--	--	2E-07	2E-07	(Total)		--	--	6E-03	6E-03
Total Risk Across Soil/Sludge						2E-06	Total Hazard Index Across All Media and All Exposure Routes						3E-01

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across All Media and All Exposure Routes

Total Skin HI =	2E-02
Total Nervous System HI =	3E-02
Total Immune System HI =	N/A
Total Kidney HI =	4E-03
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.10.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Park Visitor
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 3	Dioxin TEQ	1E-06	--	4E-07	2E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	--	N/A	Antimony	Blood	8E-03	--	--	8E-03
			Arsenic	5E-07	--	1E-07	6E-07	Arsenic	Skin	3E-02	--	7E-03	4E-02
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	4E-02	--	4E-02	8E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	2E+00	--	--	2E+00
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	3E-02	--	--	3E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	1E-01	--	--	1E-01
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	8E-03	--	--	8E-03
			(total)	2E-06	--	5E-07	2E-06	(Total)		2E+00	--	5E-02	2E+00
Surface Water	Surface Water	Lagoon 3	No samples				No samples						
			(total)	--	--	--	N/A	(Total)		--	--	--	N/A
Total Risk Across Soil/Sludge							2E-06	Total Hazard Index Across All Media and All Exposure Routes					2E+00
Total Risk Across Surface Water							N/A						
Total Risk Across All Media and All Exposure Routes							2E-06						
-- = Not Evaluated													
N/A = Not Applicable													
								Total Skin HI =					4E-02

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	4E-02
Total Nervous System HI =	1E-01
Total Immune System HI =	N/A
Total Kidney HI =	8E-02
Total Blood HI =	8E-03
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.11.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Park Visitor
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Innallation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 4	Benzo(a)anthracene	8E-08	--	4E-08	1E-07	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	8E-07	--	4E-07	1E-06	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	8E-08	--	4E-08	1E-07	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	8E-07	--	4E-07	1E-06	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	8E-08	--	4E-08	1E-07	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A
			Naphthalene	N/A	--	N/A	N/A	Naphthalene	Body Weight	4E-05	--	2E-05	7E-05
			Pentachlorophenol	3E-08	--	4E-08	7E-08	Pentachlorophenol	Kidney	8E-05	--	8E-05	2E-04
			Dioxin TEQ	6E-05	--	7E-06	6E-05	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	3E-08	--	4E-07	4E-06	Arsenic	Skin	6E-02	--	8E-03	7E-02
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	9E-04	--	4E-04	1E-03
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	1E-01	--	--	1E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	3E-02	--	--	3E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	8E-03	--	--	9E-03
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	1E-01	--	--	1E-01
(total)				6E-05	--	9E-06	7E-05	(Total)		3E-01	--	9E-03	3E-01
Surface Water	Surface Water	Lagoon 4	Dioxin TEQ	--	--	2E-07	2E-07	Dioxin TEQ	N/A	--	--	N/A	N/A
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	4E-02	4E-02
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	3E-04	3E-04
			(total)	--	--	2E-07	2E-07	(Total)		--	--	4E-02	4E-02
Total Risk Across Soil/Sludge							7E-05	Total Hazard Index Across All Media and All Exposure Routes					4E-01
Total Risk Across Surface Water							2E-07						
Total Risk Across All Media and All Exposure Routes							7E-05						
-- = Not Evaluated								Total Skin H _i =					7E-02
N/A = Not Applicable													

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	7E-02
Total Nervous System HI =	8E-02
Total Immune System HI =	3E-04
Total Kidney HI =	2E-03
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.11.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Park Visitor
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 4	Benzo(a)anthracene	6E-09	--	7E-09	1E-08	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	6E-08	--	7E-08	1E-07	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	6E-09	--	7E-09	1E-08	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	6E-08	--	7E-08	1E-07	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	6E-09	--	7E-09	1E-08	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A
			Naphthalene	N/A	--	N/A	N/A	Naphthalene	Body Weight	1E-05	--	1E-05	2E-05
			Pentachlorophenol	3E-09	--	6E-09	8E-09	Pentachlorophenol	Kidney	2E-05	--	4E-05	6E-05
			Dioxin TEQ	8E-07	--	2E-07	1E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	3E-07	--	7E-08	3E-07	Arsenic	Skin	2E-02	--	4E-03	2E-02
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	2E-04	--	2E-04	4E-04
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	3E-02	--	--	3E-02
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	7E-03	--	--	7E-03
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	2E-03	--	--	2E-03
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	3E-02	--	--	3E-02
			(total)				1E-06	--	4E-07	2E-06	(Total)		8E-02
Surface Water	Surface Water	Lagoon 4	Dioxin TEQ	--	--	2E-08	2E-08	Dioxin TEQ	N/A	--	--	N/A	N/A
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	4E-03	4E-03
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	4E-05	4E-05
			(total)				--	--	2E-08	2E-08	(Total)		--

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across Soil/Sludge 2E-06
Total Risk Across Surface Water 2E-08
Total Risk Across All Media and All Exposure Routes 2E-06

Total Hazard Index Across All Media and All Exposure Routes

9E-02

Total Skin HI = 2E-02
Total Nervous System HI = 1E-02
Total Immune System HI = 4E-05
Total Kidney HI = 5E-04
Total Blood HI = N/A
Total Growth HI = N/A
Total Liver HI = N/A

TABLE 9.12.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Park Visitor
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 5	Benzo(a)pyrene	1E-08	--	6E-07	2E-06	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			bis(2-Chloroethoxy)methane	N/A	--	--	N/A	bis(2-Chloroethoxy)methane	N/A	N/A	--	--	N/A
			Bis(2-chloroethyl)ether	2E-07	--	--	2E-07	Bis(2-chloroethyl)ether	N/A	N/A	--	--	N/A
			N-Nitroso-di-n-propylamine	2E-06	--	--	2E-06	N-Nitroso-di-n-propylamine	N/A	N/A	--	--	N/A
			Nitrobenzene	N/A	--	--	N/A	Nitrobenzene	Blood	2E-03	--	--	2E-03
			Pentachlorophenol	4E-08	--	4E-08	8E-08	Pentachlorophenol	Kidney	8E-05	--	9E-05	2E-04
			Aroclor 1248	6E-08	--	4E-08	1E-07	Aroclor 1248	Immune System	1E-02	--	7E-03	2E-02
			Dioxin TEQ	1E-04	--	2E-05	2E-04	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	--	N/A	Antimony	Blood	8E-02	--	--	8E-02
			Arsenic	4E-06	--	5E-07	4E-06	Arsenic	Skin	7E-02	--	9E-03	8E-02
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	4E-02	--	2E-02	6E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	1E+01	--	--	1E+01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	8E-02	--	--	8E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	2E-01	--	--	2E-01
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	7E-01	--	--	7E-01
(total)				2E-04	--	2E-05	2E-04	(Total)		1E+01	--	3E-02	1E+01
Surface Water	Surface Water	Lagoon 5	Dioxin TEQ	--	--	1E-06	1E-06	Dioxin TEQ	N/A	--	--	N/A	N/A
			Chromium	--	--	N/A	N/A	Chromium	NOAEL	--	--	4E-05	4E-05
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	9E-03	9E-03
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	3E-04	3E-04
			(total)				--	--	1E-06	1E-06	(Total)		--
Total Risk Across Soil/Sludge						2E-04	Total Hazard Index Across All Media and All Exposure Routes						1E+01

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across Soil/Sludge 2E-04
Total Risk Across Surface Water 1E-06
Total Risk Across All Media and All Exposure Routes 2E-04

Total Hazard Index Across All Media and All Exposure Routes 1E+01

Total Skin HI = 8E-02
Total Nervous System HI = 3E-01
Total Immune System HI = 2E-02
Total Kidney HI = 6E-02
Total Blood HI = 8E-02
Total Growth HI = N/A
Total Liver HI = N/A

TABLE 9.12.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAI TANNERY

Scenario Timeframe: Future
Receptor Population: Park Visitor
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 5	Benzo(a)pyrene	6E-08	--	7E-08	1E-07	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			bis(2-Chloroethoxy)methane	N/A	--	--	N/A	bis(2-Chloroethoxy)methane	N/A	N/A	--	--	N/A
			Bis(2-chloroethyl)ether	1E-08	--	--	1E-08	Bis(2-chloroethyl)ether	N/A	N/A	--	--	N/A
			N-Nitroso-di-n-propylamine	8E-08	--	--	8E-08	N-Nitroso-di-n-propylamine	N/A	N/A	--	--	N/A
			Nitrobenzene	N/A	--	--	N/A	Nitrobenzene	Blood	5E-04	--	--	5E-04
			Pentachlorophenol	3E-09	--	6E-09	9E-09	Pentachlorophenol	Kidney	2E-05	--	5E-05	7E-05
			Aroclor 1248	5E-09	--	6E-09	1E-08	Aroclor 1248	Immune System	3E-03	--	4E-03	7E-03
			Dioxin TEQ	1E-05	--	3E-06	1E-05	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	--	N/A	Antimony	Blood	2E-02	--	--	2E-02
			Arsenic	1E-07	--	3E-08	2E-07	Arsenic	Skin	8E-03	--	2E-03	1E-02
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	1E-02	--	9E-03	2E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	3E+00	--	--	3E+00
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	2E-02	--	--	2E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	2E-02	--	--	2E-02
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	2E-01	--	--	2E-01
(total)				1E-05	--	3E-06	1E-05	(Total)		3E+00	--	1E-02	3E+00
Surface Water	Surface Water	Lagoon 5	Dioxin TEQ	--	--	2E-07	2E-07	Dioxin TEQ	N/A	--	--	N/A	N/A
			Chromium	--	--	N/A	N/A	Chromium	NOAEL	--	--	1E-05	1E-05
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	2E-03	2E-03
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	8E-05	8E-05
			(total)	--	--	2E-07	2E-07	(Total)		--	--	2E-03	2E-03
Total Risk Across Soil/Sludge							1E-05	Total Hazard Index Across All Media and All Exposure Routes					3E+00
Total Risk Across Surface Water							2E-07						
Total Risk Across All Media and All Exposure Routes							2E-05						
								Total Skin HI =					1E-02
-- = Not Evaluated													
N/A = Not Applicable													

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E-02
Total Nervous System HI =	3E-02
Total Immune System HI =	7E-03
Total Kidney HI =	2E-02
Total Blood HI =	2E-02
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.13.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Park Visitor
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Young Child + Adult					Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil	Warehouse Area	Acetophenone	N/A	--	--	N/A	Acetophenone	NOAEL	4E-06	--	--	4E-06
			Benzo(a)anthracene	8E-08	--	4E-08	1E-07	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	1E-06	--	5E-07	1E-06	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	2E-07	--	1E-07	3E-07	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	6E-07	--	4E-07	1E-06	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	7E-08	--	4E-08	1E-07	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A
			Dioxin TEQ	7E-07	--	9E-08	8E-07	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	5E-06	--	7E-07	6E-06	Arsenic	Skin	1E-01	--	1E-02	1E-01
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	4E-02	--	--	4E-02
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	4E-02	--	--	4E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	5E-03	--	--	5E-03
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	3E-01	--	--	3E-01
			Vanadium	N/A	--	--	N/A	Vanadium	NOAEL	6E-03	--	--	6E-03
			(total)	8E-06	--	2E-06	1E-05	(Total)		5E-01	--	1E-02	5E-01
Total Risk Across All Media and All Exposure Routes							1E-05	Total Hazard Index Across All Media and All Exposure Routes					5E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E-01
Total Nervous System HI =	4E-02
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.13.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
POWNAI TANNERY

Scenario Timeframe: Future
Receptor Population: Park Visitor
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil	Warehouse Area	Acetophenone	N/A	--	--	N/A	Acetophenone	NOAEL	1E-06	--	--	1E-06
			Benzo(a)anthracene	6E-09	--	7E-09	1E-08	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	8E-08	--	8E-08	2E-07	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	2E-08	--	2E-08	4E-08	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	5E-08	--	6E-08	1E-07	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	6E-09	--	6E-09	1E-08	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A
			Dioxin TEQ	6E-08	--	1E-08	7E-08	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	4E-07	--	1E-07	5E-07	Arsenic	Skin	2E-02	--	6E-03	3E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	1E-02	--	--	1E-02
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E-02	--	--	1E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	1E-03	--	--	1E-03
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	8E-02	--	--	8E-02
			Vanadium	N/A	--	--	N/A	Vanadium	NOAEL	1E-03	--	--	1E-03
			(total)	6E-07	--	3E-07	9E-07	(Total)		1E-01	--	6E-03	1E-01
Total Risk Across All Media and All Exposure Routes						9E-07	Total Hazard Index Across All Media and All Exposure Routes						1E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	3E-02
Total Nervous System HI =	1E-02
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.14.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Park Visitor
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Hoosic River	Benzo(a)anthracene	1E-07	--	6E-08	2E-07	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	5E-07	--	3E-07	6E-07	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	9E-08	--	5E-08	1E-07	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	4E-07	--	2E-07	6E-07	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	5E-08	--	2E-08	7E-08	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A
			Phenanthrene	N/A	--	N/A	N/A	Phenanthrene	Body Weight	8E-05	--	6E-05	1E-04
			Aroclor 1254	4E-08	--	2E-08	6E-08	Aroclor 1254	Immune System	7E-03	--	4E-03	1E-02
			Aroclor 1260	2E-08	--	1E-08	3E-08	Aroclor 1260	Immune System	4E-03	--	2E-03	6E-03
			PCB TEQ	2E-04	--	3E-05	2E-04	PCB TEQ	N/A	N/A	--	N/A	N/A
			Dioxin TEQ	3E-06	--	4E-07	3E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	2E-06	--	3E-07	2E-06	Arsenic	Skin	4E-02	--	5E-03	4E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	2E-02	--	--	2E-02
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	2E-02	--	--	2E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	1E-02	--	--	1E-02
(total)	2E-04	--	3E-05	2E-04	(Total)		1E-01	--	1E-02	1E-01			
Surface Water	Surface Water	Hoosic River	Dioxin TEQ	6E-08	--	1E-05	1E-05	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	N/A	Manganese	Nervous System	3E-02	--	4E-02	7E-02
			Mercury	N/A	--	N/A	N/A	Mercury	Immune System	2E-04	--	2E-04	4E-04
			(total)	6E-08	--	1E-05	1E-05	(Total)		3E-02	--	4E-02	7E-02
Total Risk Across Sediment							2E-04	Total Hazard Index Across All Media and All Exposure Routes					2E-01
Total Risk Across Surface Water							1E-05						
Total Risk Across All Media and All Exposure Routes							2E-04						
-- = Not Evaluated													
N/A = Not Applicable													
Total Risk Across All Media and All Exposure Routes							2E-04	Total Skin HI =					4E-02

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	4E-02
Total Nervous System HI =	1E-01
Total Immune System HI =	2E-02
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.14.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Park Visitor
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Hoosic River	Benzo(a)anthracene	8E-09	--	9E-09	2E-08	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	4E-08	--	4E-08	6E-08	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	7E-09	--	8E-09	1E-08	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	3E-08	--	4E-08	7E-08	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	4E-09	--	4E-09	8E-09	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A
			Phenanthrene	N/A	--	N/A	N/A	Phenanthrene	Body Weight	2E-05	--	2E-05	4E-05
			Aroclor 1254	3E-09	--	3E-09	6E-09	Aroclor 1254	Immune System	2E-03	--	2E-03	4E-03
			Aroclor 1260	2E-09	--	2E-09	3E-09	Aroclor 1260	Immune System	1E-03	--	1E-03	2E-03
			PCB TEQ	2E-05	--	4E-06	2E-05	PCB TEQ	N/A	N/A	--	N/A	N/A
			Dioxin TEQ	3E-08	--	7E-09	4E-08	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	2E-07	--	4E-08	2E-07	Arsenic	Skin	1E-02	--	3E-03	1E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	4E-03	--	--	4E-03
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	5E-03	--	--	5E-03
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	3E-03	--	--	3E-03
(total)				2E-05	--	4E-06	2E-05	(Total)		2E-02	--	6E-03	3E-02
Surface Water	Surface Water	Hoosic River	Dioxin TEQ	5E-10	--	7E-07	7E-07	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Manganese	N/A	--	N/A	N/A	Manganese	Nervous System	7E-04	--	1E-03	2E-03
			Mercury	N/A	--	N/A	N/A	Mercury	Immune System	2E-05	--	2E-05	4E-05
			(total)	5E-10	--	7E-07	7E-07	(Total)		7E-04	--	1E-03	2E-03
Total Risk Across Sediment						2E-05	Total Hazard Index Across All Media and All Exposure Routes						3E-02

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across Sediment
Total Risk Across Surface Water
Total Risk Across All Media and All Exposure Routes

2E-05
7E-07
2E-05

Total Hazard Index Across All Media and All Exposure Routes

3E-02

Total Skin HI = 1E-02
Total Nervous System HI = 9E-03
Total Immune System HI = 6E-03
Total Kidney HI = N/A
Total Blood HI = N/A
Total Growth HI = N/A
Total Liver HI = N/A

TABLE 9.15.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient						
				Young Child + Adult					Young Child						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Groundwater	Groundwater	Tap Water Residential Well - RW-001	Antimony	N/A	--	--	N/A	Antimony	Blood	4E-01	--	--	4E-01		
			(total)	N/A	--	--	N/A	(Total)	4E-01	--	--	4E-01			
Total Risk Across All Media and All Exposure Routes							N/A	Total Hazard Index Across All Media and All Exposure Routes							4E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	N/A
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	4E-01
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.15.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Tap Water Residential Well - RW-001	Antimony	N/A	--	--	N/A	Antimony	Blood	1E-01	--	--	1E-01
			(total)	N/A	--	--	N/A	(Total)	1E-01	--	--	1E-01	
Total Risk Across All Media and All Exposure Routes							N/A	Total Hazard Index Across All Media and All Exposure Routes					1E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	N/A
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	1E-01
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.16.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Tap Water Residential Well - RW-002	Arsenic	8E-05	--	--	8E-05	Arsenic (Total)	Skin	1E+00	--	--	1E+00
			(total)	8E-05	--	--	8E-05			1E+00	--	--	1E+00
Total Risk Across All Media and All Exposure Routes							8E-05	Total Hazard Index Across All Media and All Exposure Routes					1E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E+00
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.16.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Tap Water Residential Well - RW-002	Arsenic	1E-05	--	--	1E-05	Arsenic	Skin	4E-01	--	--	4E-01
			(total)	1E-05	--	--	1E-05	(Total)		4E-01	--	--	4E-01
Total Risk Across All Media and All Exposure Routes							1E-05	Total Hazard Index Across All Media and All Exposure Routes					4E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	4E-01
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.17.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Tap Water Residential Well - RW-003	Bis(2-ethylhexyl)phthalate	3E-06	--	--	3E-06	Bis(2-ethylhexyl)phthalate	Liver	6E-02	--	--	6E-02
			Antimony	N/A	--	--	N/A	Antimony	Blood	5E-01	--	--	5E-01
			Arsenic	1E-04	--	--	1E-04	Arsenic	Skin	2E+00	--	--	2E+00
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	9E-01	--	--	9E-01
			(total)	1E-04	--	--	1E-04	(Total)		3E+00	--	--	3E+00
Total Risk Across All Media and All Exposure Routes							1E-04	Total Hazard Index Across All Media and All Exposure Routes					3E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	2E+00
Total Nervous System HI =	9E-01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	5E-01
Total Growth HI =	N/A
Total Liver HI =	6E-02

TABLE 9.17.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Tap Water Residential Well - RW-003	Bis(2-ethylhexyl)phthalate	3E-07	--	--	3E-07	Bis(2-ethylhexyl)phthalate	Liver	2E-02	--	--	2E-02
			Antimony	N/A	--	--	N/A	Antimony	Blood	2E-01	--	--	2E-01
			Arsenic	3E-05	--	--	3E-05	Arsenic	Skin	9E-01	--	--	9E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	5E-01	--	--	5E-01
			(total)	3E-05	--	--	3E-05	(Total)		2E+00	--	--	2E+00
Total Risk Across All Media and All Exposure Routes							3E-05	Total Hazard Index Across All Media and All Exposure Routes					2E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	9E-01
Total Nervous System HI =	5E-01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	2E-01
Total Growth HI =	N/A
Total Liver HI =	2E-02

TABLE 9.18.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Tap Water Residential Well - RW-004	Manganese	N/A	--	--	N/A	Manganese	Nervous System	9E-01	--	--	9E-01
			(total)	N/A	--	--	N/A	(Total)		9E-01	--	--	9E-01
Total Risk Across All Media and All Exposure Routes							N/A	Total Hazard Index Across All Media and All Exposure Routes					9E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	N/A
Total Nervous System HI =	9E-01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.10.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Park Visitor
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 3	Dioxin TEQ	2E-04	--	2E-05	2E-04	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	--	N/A	Antimony	Blood	3E-02	--	--	3E-02
			Arsenic	6E-06	--	8E-07	7E-06	Arsenic	Skin	1E-01	--	1E-02	1E-01
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	2E-01	--	8E-02	2E-01
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	2E+01	--	--	2E+01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E-01	--	--	1E-01
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	4E-01	--	--	4E-01
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	3E-02	--	--	3E-02
			(total)	2E-04	--	3E-05	2E-04	(Total)		3E+01	--	9E-02	3E+01
Surface Water	Surface Water	Lagoon 3	No samples				No samples						
			(total)	--	--	--	N/A	(Total)		--	--	--	N/A
Total Risk Across Soil/Sludge							2E-04	Total Hazard Index Across All Media and All Exposure Routes					3E+01
Total Risk Across Surface Water							N/A						
Total Risk Across All Media and All Exposure Routes							2E-04						
								Total Skin HI =					1E-01
-- = Not Evaluated													
N/A = Not Applicable													

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E-01
Total Nervous System HI =	5E-01
Total Immune System HI =	N/A
Total Kidney HI =	2E-01
Total Blood HI =	3E-02
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.18.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Tap Water Residential Well - RW-004	Manganese	N/A	--	--	N/A	Manganese	Nervous System	5E-01	--	--	5E-01
			(total)	N/A	--	--	N/A	(Total)		5E-01	--	--	5E-01
Total Risk Across All Media and All Exposure Routes							N/A	Total Hazard Index Across All Media and All Exposure Routes					5E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	N/A
Total Nervous System HI =	5E-01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.19.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	ingestion	Inhalation	Dermal	Exposure Routes Total		
Groundwater	Groundwater	Tap Water Residential Well - RW-006	Methyl tert-butyl ether	N/A	--	--	N/A	Methyl tert-butyl ether	N/A	N/A	--	--	N/A		
			Bis(2-ethylhexyl)phthalate	9E-06	--	--	9E-06	Bis(2-ethylhexyl)phthalate	Liver	2E-01	--	--	2E-01		
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	2E+00	--	--	2E+00		
			(total)	9E-06	--	--	9E-06	(Total)	2E+00	--	--	2E+00			
Total Risk Across All Media and All Exposure Routes							9E-06	Total Hazard Index Across All Media and All Exposure Routes							2E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	N/A
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	2E-01

TABLE 9.19.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Tap Water Residential Well - RW-006	Methyl tert-butyl ether	N/A	--	--	N/A	Methyl tert-butyl ether	N/A	N/A	--	--	N/A
			Bis(2-ethylhexyl)phthalate	9E-07	--	--	9E-07	Bis(2-ethylhexyl)phthalate	Liver	5E-02	--	--	5E-02
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	1E+00	--	--	1E+00
			(total)	9E-07	--	--	9E-07	(Total)	1E+00	--	--	1E+00	
Total Risk Across All Media and All Exposure Routes							9E-07	Total Hazard Index Across All Media and All Exposure Routes					1E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	N/A
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	5E-02

TABLE 9.20.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Tap Water Residential Well - RW-007	Antimony	N/A	--	--	N/A	Antimony	Blood Skin	5E-01	--	--	5E-01
			Arsenic	1E-05	--	--	1E-05	Arsenic		2E-01	--	--	2E-01
			(total)	1E-05	--	--	1E-05	(Total)		6E-01	--	--	6E-01
Total Risk Across All Media and All Exposure Routes							1E-05	Total Hazard Index Across All Media and All Exposure Routes					6E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	2E-01
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	5E-01
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.20.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Tap Water Residential Well - RW-007	Antimony	N/A	--	--	N/A	Antimony	Blood Skin	2E-01	--	--	2E-01
			Arsenic	2E-06	--	--	2E-06	Arsenic		8E-02	--	--	8E-02
			(total)	2E-06	--	--	2E-06	(Total)		2E-01	--	--	2E-01
Total Risk Across All Media and All Exposure Routes							2E-06	Total Hazard Index Across All Media and All Exposure Routes					2E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	8E-02
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	2E-01
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.21.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Young Child + Adult					Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Tap Water	Arsenic	9E-05	--	--	8E-05	Arsenic	Skin	1E+00	--	--	1E+00
		Residential Well - RW-008	Manganese	N/A	--	--	N/A	Manganese	Nervous System	2E+00	--	--	2E+00
		(total)	8E-05	--	--	8E-05	(Total)	3E+00	--	--	3E+00		
Total Risk Across All Media and All Exposure Routes							8E-05	Total Hazard Index Across All Media and All Exposure Routes					3E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E+00
Total Nervous System HI =	2E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.21.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPOs
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Tap Water Residential Well - RW-008	Arsenic	1E-05	--	--	1E-05	Arsenic Manganese (Total)	Skin Nervous System (Total)	5E-01	--	--	5E-01
			Manganese	N/A	--	--	N/A			8E-01	--	--	8E-01
			(total)	1E-05	--	--	1E-05			1E+00	--	--	1E+00
Total Risk Across All Media and All Exposure Routes							1E-05	Total Hazard Index Across All Media and All Exposure Routes					1E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	5E-01
Total Nervous System HI =	8E-01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.22.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Young Child + Adult					Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Tap Water Residential Well - RW-010	Arsenic	4E-05	--	--	4E-05	Arsenic Manganese (Total)	Skin	5E-01	--	--	5E-01
			Manganese	N/A	--	--	N/A		Nervous System	3E+00	--	--	3E+00
			(total)	4E-05	--	--	4E-05			3E+00	--	--	3E+00
Total Risk Across All Media and All Exposure Routes							4E-05	Total Hazard Index Across All Media and All Exposure Routes					3E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	5E-01
Total Nervous System HI =	3E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.22.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Young Child + Adult					Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Tap Water Residential Well - RW-010	Arsenic	8E-06	--	--	8E-06	Arsenic	Skin	3E-01	--	--	3E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	2E+00	--	--	2E+00
			{total}	8E-06	--	--	8E-06	{Total}		2E+00	--	--	2E+00
Total Risk Across All Media and All Exposure Routes							8E-06	Total Hazard Index Across All Media and All Exposure Routes					2E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	3E-01
Total Nervous System HI =	2E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.23.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Young Child + Adult					Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil	Warehouse Area	Acetophenone	N/A	--	--	N/A	Acetophenone	NOAEL	5E-06	--	--	5E-06
			Benzo(a)anthracene	1E-07	--	6E-06	2E-07	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	1E-06	--	7E-07	2E-06	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	3E-07	--	2E-07	4E-07	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	9E-07	--	5E-07	1E-06	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	9E-08	--	5E-06	1E-07	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A
			Dioxin TEQ	1E-06	--	1E-07	1E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	7E-06	--	9E-07	8E-06	Arsenic	Skin	1E-01	--	2E-02	1E-01
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	6E-02	--	--	6E-02
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	5E-02	--	--	5E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	6E-03	--	--	6E-03
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	4E-01	--	--	4E-01
			Vanadium	N/A	--	--	N/A	Vanadium	NOAEL	8E-03	--	--	8E-03
			(total)	1E-05	--	2E-06	1E-05	(Total)		7E-01	--	2E-02	7E-01
Total Risk Across All Media and All Exposure Routes						1E-05	Total Hazard Index Across All Media and All Exposure Routes						7E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E-01
Total Nervous System HI =	6E-02
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.23.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Young Child + Adult					Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil	Warehouse Area	Acetophenone	N/A	--	--	N/A	Acetophenone	NOAEL	3E-06	--	--	3E-06
			Benzo(a)anthracene	2E-08	--	2E-08	4E-08	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	2E-07	--	2E-07	4E-07	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	5E-08	--	5E-08	1E-07	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	1E-07	--	2E-07	3E-07	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	1E-08	--	2E-08	3E-08	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A
			Dioxin TEQ	2E-07	--	4E-08	2E-07	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	1E-06	--	3E-07	1E-06	Arsenic	Skin	6E-02	--	2E-02	8E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	3E-02	--	--	3E-02
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	3E-02	--	--	3E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	3E-03	--	--	3E-03
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	2E-01	--	--	2E-01
			Vanadium	N/A	--	--	N/A	Vanadium	NOAEL	4E-03	--	--	4E-03
			(total)	2E-06	--	8E-07	2E-06	(Total)		3E-01	--	2E-02	3E-01
			Total Risk Across All Media and All Exposure Routes							2E-06	Total Hazard Index Across All Media and All Exposure Routes		

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	8E-02
Total Nervous System HI =	3E-02
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.24.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-101U	Methylene chloride	3E-06	--	--	3E-06	Methylene chloride	Liver	4E-02	--	--	4E-02
			Antimony	N/A	--	--	N/A	Antimony	Blood	4E-01	--	--	4E-01
			Arsenic	4E-05	--	--	4E-05	Arsenic	Skin	5E-01	--	--	5E-01
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	7E-04	--	--	7E-04
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	9E-01	--	--	9E-01
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	1E+00	--	--	1E+00
			(total)	4E-05	--	--	4E-05	(Total)		3E+00	--	--	3E+00
Total Risk Across All Media and All Exposure Routes						4E-05	Total Hazard Index Across All Media and All Exposure Routes						3E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	5E-01
Total Nervous System HI =	9E-01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	4E-01
Total Growth HI =	N/A
Total Liver HI =	4E-02

TABLE 9.24.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-101U	Methylene chloride	3E-07	--	--	3E-07	Methylene chloride	Liver	9E-03	--	--	9E-03
			Antimony	N/A	--	--	N/A	Antimony	Blood	1E-01	--	--	1E-01
			Arsenic	3E-06	--	--	3E-06	Arsenic	Skin	1E-01	--	--	1E-01
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	2E-04	--	--	2E-04
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	2E-01	--	--	2E-01
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	5E-01	--	--	5E-01
			(total)	3E-06	--	--	3E-06	(Total)		1E+00	--	--	1E+00
Total Risk Across All Media and All Exposure Routes							3E-06	Total Hazard Index Across All Media and All Exposure Routes					1E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E-01
Total Nervous System HI =	2E-01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	1E-01
Total Growth HI =	N/A
Total Liver HI =	9E-03

TABLE 9.25.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-102U	Arsenic	7E-06	--	--	7E-06	Arsenic	Skin	8E-02	--	--	8E-02
			(total)	7E-06	--	--	7E-06	(Total)		8E-02	--	--	8E-02
Total Risk Across All Media and All Exposure Routes							7E-06	Total Hazard Index Across All Media and All Exposure Routes					8E-02

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	8E-02
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.25.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient						
				Young Child + Adult					Young Child						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Groundwater	Groundwater	On-Site Monitoring Well MW-102U	Arsenic	1E-06	--	--	1E-06	Arsenic (Total)	Skin	5E-02	--	--	5E-02		
			(total)	1E-06	--	--	1E-06			5E-02	--	--	5E-02		
Total Risk Across All Media and All Exposure Routes							1E-06	Total Hazard Index Across All Media and All Exposure Routes							5E-02

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	5E-02
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.26.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-103R	Antimony	N/A	--	--	N/A	Antimony	Blood	5E-01	--	--	5E-01
			Arsenic	5E-06	--	--	5E-06	Arsenic	Skin	6E-01	--	--	6E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	5E-01	--	--	5E-01
			(total)	5E-06	--	--	5E-06	(Total)		2E+00	--	--	2E+00
Total Risk Across All Media and All Exposure Routes							5E-06	Total Hazard Index Across All Media and All Exposure Routes					2E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	6E-01
Total Nervous System HI =	5E-01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	5E-01
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.26.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-103R	Antimony	N/A	--	--	N/A	Antimony	Blood	2E-01	--	--	2E-01
			Arsenic	8E-06	--	--	8E-06	Arsenic	Skin	3E-01	--	--	3E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	2E-01	--	--	2E-01
			(total)	8E-06	--	--	8E-06	(Total)		7E-01	--	--	7E-01
Total Risk Across All Media and All Exposure Routes							8E-06	Total Hazard Index Across All Media and All Exposure Routes					7E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	3E-01
Total Nervous System HI =	2E-01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	2E-01
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.27.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future Receptor Population: Resident Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-103U	Arsenic	2E-05	--	--	2E-05	Arsenic	Skin	3E-01	--	--	3E-01
			(total)	2E-05	--	--	2E-05			3E-01	--	--	3E-01
Total Risk Across All Media and All Exposure Routes							2E-05	Total Hazard Index Across All Media and All Exposure Routes					3E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	3E-01
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.27.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-103U	Arsenic	3E-06	--	--	3E-06	Arsenic (Total)	Skin	9E-02	--	--	9E-02
			(total)	3E-06	--	--	3E-06			9E-02	--	--	9E-02
Total Risk Across All Media and All Exposure Routes							3E-06	Total Hazard Index Across All Media and All Exposure Routes					9E-02

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	9E-02
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.28.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-104U	Arsenic	6E-05	--	--	6E-05	Arsenic	Skin	7E-01	--	--	7E-01
				N/A	--	--	N/A			Nervous System	4E+00	--	--
			Manganese	(total)	6E-05	--	--	6E-05	(Total)		5E+00	--	--
Total Risk Across All Media and All Exposure Routes							6E-05	Total Hazard Index Across All Media and All Exposure Routes					5E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	7E-01
Total Nervous System HI =	4E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.28.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Young Child + Adult					Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-104U	Arsenic	1E-05	--	--	1E-05	Arsenic	Skin	4E-01	--	--	4E-01
				N/A	--	--	N/A			Nervous System	2E+00	--	--
			Manganese	(total)	1E-05	--	--	1E-05	(Total)		2E+00	--	--
Total Risk Across All Media and All Exposure Routes							1E-05	Total Hazard Index Across All Media and All Exposure Routes					2E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	4E-01
Total Nervous System HI =	2E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.29.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-106U	Arsenic	5E-05	--	--	5E-05	Arsenic Manganese (Total)	Skin Nervous System	6E-01	--	--	6E-01
			Manganese	N/A	--	--	N/A			2E+00	--	--	2E+00
			(total)	5E-05	--	--	5E-05			2E+00	--	--	2E+00
Total Risk Across All Media and All Exposure Routes							5E-05	Total Hazard Index Across All Media and All Exposure Routes					2E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	6E-01
Total Nervous System HI =	2E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.29.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-106U	Arsenic	5E-06	--	--	5E-06	Arsenic Manganese (Total)	Skin	2E-01	--	--	2E-01
			Manganese	N/A	--	--	N/A		Nervous System	4E-01	--	--	4E-01
			(total)	5E-06	--	--	5E-06			6E-01	--	--	6E-01
Total Risk Across All Media and All Exposure Routes							5E-06	Total Hazard Index Across All Media and All Exposure Routes					6E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	2E-01
Total Nervous System HI =	4E-01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.30.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-107R	Dioxin TEQ	9E-06	--	--	9E-06	Dioxin TEQ	N/A	N/A	--	--	N/A
			Arsenic	2E-04	--	--	2E-04	Arsenic	Skin	3E+00	--	--	3E+00
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	6E+00	--	--	6E+00
			(total)	2E-04	--	--	2E-04	(Total)		9E+00	--	--	9E+00
Total Risk Across All Media and All Exposure Routes							2E-04	Total Hazard Index Across All Media and All Exposure Routes					9E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	3E+00
Total Nervous System HI =	6E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.30.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-107R	Dioxin TEQ	2E-06	--	--	2E-06	Dioxin TEQ	N/A	N/A	--	--	N/A
			Arsenic	3E-05	--	--	3E-05	Arsenic	Skin	1E+00	--	--	1E+00
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	3E+00	--	--	3E+00
			(total)	3E-05	--	--	3E-05	(Total)		4E+00	--	--	4E+00
Total Risk Across All Media and All Exposure Routes							3E-05	Total Hazard Index Across All Media and All Exposure Routes					4E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E+00
Total Nervous System HI =	3E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.31.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-107U	Antimony	N/A	--	--	N/A	Antimony	Blood	4E-01	--	--	4E-01
			Arsenic	9E-05	--	--	9E-05	Arsenic	Skin	1E+00	--	--	1E+00
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E+01	--	--	1E+01
			(total)	9E-05	--	--	9E-05	(Total)		2E+01	--	--	2E+01
Total Risk Across All Media and All Exposure Routes							9E-05	Total Hazard Index Across All Media and All Exposure Routes					2E+01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E+00
Total Nervous System HI =	1E+01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	4E-01
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.31.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-107U	Antimony	N/A	--	--	N/A	Antimony	Blood	1E-01	--	--	1E-01
			Arsenic	2E-05	--	--	2E-05	Arsenic	Skin	6E-01	--	--	6E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	6E+00	--	--	6E+00
			(total)	2E-05	--	--	2E-05	(Total)		7E+00	--	--	7E+00
Total Risk Across All Media and All Exposure Routes							2E-05	Total Hazard Index Across All Media and All Exposure Routes					7E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	6E-01
Total Nervous System HI =	6E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	1E-01
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.32.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-109U	Carbon tetrachloride	2E-06	--	--	2E-06	Carbon tetrachloride	Liver	1E-01	--	--	1E-01
			Heptachlor epoxide	2E-06	--	--	2E-06	Heptachlor epoxide	Liver	1E-01	--	--	1E-01
			Arsenic	6E-04	--	--	6E-04	Arsenic	Skin	7E+00	--	--	7E+00
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	2E+01	--	--	2E+01
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	9E+00	--	--	9E+00
			(total)	6E-04	--	--	6E-04	(Total)		3E+01	--	--	3E+01
Total Risk Across All Media and All Exposure Routes							6E-04	Total Hazard Index Across All Media and All Exposure Routes					3E+01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	7E+00
Total Nervous System HI =	2E+01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	2E-01

TABLE 9.32.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-109U	Carbon tetrachloride	3E-07	--	--	3E-07	Carbon tetrachloride	Liver	5E-02	--	--	5E-02
			Heptachlor epoxide	4E-07	--	--	4E-07	Heptachlor epoxide	Liver	6E-02	--	--	6E-02
			Arsenic	1E-04	--	--	1E-04	Arsenic	Skin	3E+00	--	--	3E+00
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	9E+00	--	--	9E+00
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	2E+00	--	--	2E+00
			(total)	1E-04	--	--	1E-04	(Total)		1E+01	--	--	1E+01
Total Risk Across All Media and All Exposure Routes							1E-04	Total Hazard Index Across All Media and All Exposure Routes					1E+01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	3E+00
Total Nervous System HI =	9E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	1E-01

TABLE 9.33.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Young Child + Adult					Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-110R	Arsenic	1E-04	--	--	1E-04	Arsenic	Skin	2E+00	--	--	2E+00
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	7E+00	--	--	7E+00
			(total)	1E-04	--	--	1E-04	(Total)		9E+00	--	--	9E+00
Total Risk Across All Media and All Exposure Routes							1E-04	Total Hazard Index Across All Media and All Exposure Routes					9E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	2E+00
Total Nervous System HI =	7E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.33.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-110R	Arsenic	3E-05	--	--	3E-05	Arsenic	Skin	9E+01	--	--	9E-01
				N/A	--	--	N/A			Nervous System	4E+00	--	--
			(total)	3E-05	--	--	3E-05	(Total)	5E+00		--	--	5E+00
Total Risk Across All Media and All Exposure Routes							3E-05	Total Hazard Index Across All Media and All Exposure Routes					5E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	9E-01
Total Nervous System HI =	4E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.34.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-110U	Methylene chloride	2E-06	--	--	2E-06	Methylene chloride	Liver	2E-02	--	--	2E-02
			Pentachlorophenol	2E-06	--	--	2E-06	Pentachlorophenol	Kidney	3E-03	--	--	3E-03
			Antimony	N/A	--	--	N/A	Antimony	Blood	4E-01	--	--	4E-01
			Arsenic	6E-05	--	--	6E-05	Arsenic	Skin	8E-01	--	--	8E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	6E+00	--	--	6E+00
			(total)	7E-05	--	--	7E-05	(Total)		7E+00	--	--	7E+00
Total Risk Across All Media and All Exposure Routes							7E-05	Total Hazard Index Across All Media and All Exposure Routes					7E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	8E-01
Total Nervous System HI =	6E+00
Total Immune System HI =	N/A
Total Kidney HI =	3E-03
Total Blood HI =	4E-01
Total Growth HI =	N/A
Total Liver HI =	2E-02

TABLE 9.34.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-110U	Methylene chloride	2E-07	--	--	2E-07	Methylene chloride	Liver	6E-03	--	--	6E-03
			Pentachlorophenol	4E-07	--	--	4E-07	Pentachlorophenol	Kidney	2E-03	--	--	2E-03
			Antimony	N/A	--	--	N/A	Antimony	Blood	2E-01	--	--	2E-01
			Arsenic	8E-06	--	--	8E-06	Arsenic	Skin	3E-01	--	--	3E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	2E+00	--	--	2E+00
			(total)	8E-06	--	--	8E-06	(Total)		3E+00	--	--	3E+00
Total Risk Across All Media and All Exposure Routes							8E-06	Total Hazard Index Across All Media and All Exposure Routes					3E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	3E-01
Total Nervous System HI =	2E+00
Total Immune System HI =	N/A
Total Kidney HI =	2E-03
Total Blood HI =	2E-01
Total Growth HI =	N/A
Total Liver HI =	6E-03

TABLE 9.35.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-111U	Antimony	N/A	--	--	N/A	Antimony	Blood	5E-01	--	--	5E-01
			Arsenic	2E-05	--	--	2E-05	Arsenic	Skin	2E-01	--	--	2E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	3E+00	--	--	3E+00
			(total)	2E-05	--	--	2E-05	(Total)		3E+00	--	--	3E+00
Total Risk Across All Media and All Exposure Routes							2E-05	Total Hazard Index Across All Media and All Exposure Routes					3E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	2E-01
Total Nervous System HI =	3E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	5E-01
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.35.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-111U	Antimony	N/A	--	--	N/A	Antimony	Blood	1E-01	--	--	1E-01
			Arsenic	3E-06	--	--	3E-06	Arsenic	Skin	1E-01	--	--	1E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E+00	--	--	1E+00
			(total)	3E-06	--	--	3E-06	(Total)		1E+00	--	--	1E+00
Total Risk Across All Media and All Exposure Routes							3E-06	Total Hazard Index Across All Media and All Exposure Routes					1E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E-01
Total Nervous System HI =	1E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	1E-01
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.36.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-112U	Antimony	N/A	--	--	N/A	Antimony	Blood	8E-01	--	--	8E-01
			Arsenic	3E-05	--	--	3E-05	Arsenic	Skin	3E-01	--	--	3E-01
			(total)	3E-05	--	--	3E-05	(Total)		1E+00	--	--	1E+00
Total Risk Across All Media and All Exposure Routes							3E-05	Total Hazard Index Across All Media and All Exposure Routes					1E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	3E-01
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	8E-01
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.36.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAI TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Young Child + Adult					Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-112U	Antimony	N/A	--	--	N/A	Antimony	Blood	3E-01	--	--	3E-01
			Arsenic	4E-06	--	--	4E-06	Arsenic	Skin	1E-01	--	--	1E-01
			(total)	4E-06	--	--	4E-06	(Total)		4E-01	--	--	4E-01
Total Risk Across All Media and All Exposure Routes							4E-06	Total Hazard Index Across All Media and All Exposure Routes					4E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E-01
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	3E-01
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.37.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-113R	Arsenic	2E-03	--	--	2E-03	Arsenic Manganese (Total)	Skin Nervous System	2E+01	--	--	2E+01
			Manganese	N/A	--	--	N/A			5E+00	--	--	5E+00
			(total)	2E-03	--	--	2E-03			2E+01	--	--	2E+01
Total Risk Across All Media and All Exposure Routes							2E-03	Total Hazard Index Across All Media and All Exposure Routes					2E+01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	2E+01
Total Nervous System HI =	5E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.37.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-113R	Arsenic	3E-04	--	--	3E-04	Arsenic	Skin	1E+01	--	--	1E+01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	3E+00	--	--	3E+00
			(total)	3E-04	--	--	3E-04	(Total)		1E+01	--	--	1E+01
Total Risk Across All Media and All Exposure Routes							3E-04	Total Hazard Index Across All Media and All Exposure Routes					1E+01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E+01
Total Nervous System HI =	3E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.38.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child					
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total	
Groundwater	Groundwater	On-Site Monitoring Well MW-114U	1,3-Dichlorobenzene	N/A	--	--	N/A	1,3-Dichlorobenzene	N/A	7E-02	--	--	7E-02	
			1,4-Dichlorobenzene	3E-06	--	--	3E-06	1,4-Dichlorobenzene	N/A	3E-02	--	--	3E-02	
			Chlorobenzene	N/A	--	--	N/A	Chlorobenzene	Liver	2E-01	--	--	2E-01	
			Tetrachloroethylene	7E-05	--	--	7E-05	Tetrachloroethylene	Liver	7E-01	--	--	7E-01	
			Arsenic	6E-05	--	--	6E-05	Arsenic	Skin	8E-01	--	--	8E-01	
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	8E-04	--	--	8E-04	
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	4E+01	--	--	4E+01	
			(total)	1E-04	--	--	1E-04	(Total)		4E+01	--	--	4E+01	
Total Risk Across All Media and All Exposure Routes							1E-04		Total Hazard Index Across All Media and All Exposure Routes					4E+01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	8E-01
Total Nervous System HI =	4E+01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	9E-01

TABLE 9.38.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child								
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total				
Groundwater	Groundwater	On-Site Monitoring Well MW-114U	1,3-Dichlorobenzene	N/A	--	--	N/A	1,3-Dichlorobenzene	N/A	4E-02	--	--	4E-02				
			1,4-Dichlorobenzene	7E-07	--	--	7E-07	1,4-Dichlorobenzene	N/A	1E-02	--	--	1E-02				
			Chlorobenzene	N/A	--	--	N/A	Chlorobenzene	Liver	1E-01	--	--	1E-01				
			Tetrachloroethylene	1E-05	--	--	1E-05	Tetrachloroethylene	Liver	4E-01	--	--	4E-01				
			Arsenic	1E-05	--	--	1E-05	Arsenic	Skin	4E-01	--	--	4E-01				
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	5E-04	--	--	5E-04				
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	2E+01	--	--	2E+01				
			(total)	3E-05	--	--	3E-05	(Total)		2E+01	--	--	2E+01				
Total Risk Across All Media and All Exposure Routes							3E-05		Total Hazard Index Across All Media and All Exposure Routes							2E+01	

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	4E-01
Total Nervous System HI =	2E+01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	5E-01

TABLE 9.39.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Young Child + Adult					Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-B-7	Methylene chloride	3E-03	--	--	3E-03	Methylene chloride	Liver	3E+01	--	--	3E+01
			(total)	3E-03	--	--	3E-03	(Total)	3E+01	--	--	3E+01	
Total Risk Across All Media and All Exposure Routes							3E-03	Total Hazard Index Across All Media and All Exposure Routes					3E+01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	N/A
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	3E+01

TABLE 9.39.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-B-7	Methylene chloride	2E-04	--	--	2E-04	Methylene chloride	Liver	6E+00	--	--	6E+00
			(total)	2E-04	--	--	2E-04	(Total)	6E+00	--	--	6E+00	
Total Risk Across All Media and All Exposure Routes							2E-04	Total Hazard Index Across All Media and All Exposure Routes					6E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	N/A
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	6E+00

TABLE 9.40.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-L-3	1,4-Dichlorobenzene	2E-07	--	--	2E-07	1,4-Dichlorobenzene	N/A	2E-03	--	--	2E-03
			Hexavalent Chromium	N/A	--	--	N/A	Hexavalent Chromium	NOAEL	9E-01	--	--	9E-01
			Arsenic	5E-04	--	--	5E-04	Arsenic	Skin	6E+00	--	--	6E+00
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	4E+01	--	--	4E+01
			(total)	5E-04	--	--	5E-04	(Total)		5E+01	--	--	5E+01
Total Risk Across All Media and All Exposure Routes							5E-04	Total Hazard Index Across All Media and All Exposure Routes					5E+01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	6E+00
Total Nervous System HI =	4E+01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.40.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-L-3	1,4-Dichlorobenzene	4E-08	--	--	4E-08	1,4-Dichlorobenzene	N/A	1E-03	--	--	1E-03
			Hexavalent Chromium	N/A	--	--	N/A	Hexavalent Chromium	NOAEL	5E-01	--	--	5E-01
			Arsenic	7E-05	--	--	7E-05	Arsenic	Skin	2E+00	--	--	2E+00
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	2E+01	--	--	2E+01
			(total)	7E-05	--	--	7E-05	(Total)		2E+01	--	--	2E+01
Total Risk Across All Media and All Exposure Routes							7E-05	Total Hazard Index Across All Media and All Exposure Routes					2E+01

-- = Not Evaluated
N/A = Not Applicable

Total Skin HI =	2E+00
Total Nervous System HI =	2E+01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.41.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-L-4	Methylene chloride	8E-05	--	--	8E-05	Methylene chloride	Liver	9E-01	--	--	9E-01
			(total)	8E-05	--	--	8E-05	(Total)	9E-01	--	--	9E-01	
Total Risk Across All Media and All Exposure Routes							8E-05	Total Hazard Index Across All Media and All Exposure Routes					9E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	N/A
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	9E-01

TABLE 9.41.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-L-4	Methylene chloride	5E-06	--	--	5E-06	Methylene chloride	Liver	2E-01	--	--	2E-01
			{total}	5E-06	--	--	5E-06	{Total}		2E-01	--	--	2E-01
Total Risk Across All Media and All Exposure Routes							5E-06	Total Hazard Index Across All Media and All Exposure Routes					2E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	N/A
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	2E-01

TABLE 9.42.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-L-5	Arsenic	2E-05	--	--	2E-05	Arsenic Thallium (Total)	Skin NOAEL	2E-01	--	--	2E-01
			Thallium	N/A	--	--	N/A			1E+00	--	--	1E+00
			(total)	2E-05	--	--	2E-05			1E+00	--	--	1E+00
Total Risk Across All Media and All Exposure Routes							2E-05	Total Hazard Index Across All Media and All Exposure Routes					1E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	2E-01
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.42.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-L-5	Arsenic Thallium	2E-06	--	--	2E-06	Arsenic Thallium	Skin NOAEL	8E-02	--	--	8E-02
				N/A	--	--	N/A			3E-01	--	--	3E-01
			(total)	2E-06	--	--	2E-06	(Total)	4E-01	--	--	4E-01	
Total Risk Across All Media and All Exposure Routes							2E-06	Total Hazard Index Across All Media and All Exposure Routes					4E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	8E-02
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.43.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-L-7	Methylene chloride	7E-07	--	--	7E-07	Methylene chloride	Liver	9E-03	--	--	9E-03
			Arsenic	2E-05	--	--	2E-05	Arsenic	Skin	3E-01	--	--	3E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	4E-01	--	--	4E-01
			(total)	2E-05	--	--	2E-05	(Total)		6E-01	--	--	6E-01
Total Risk Across All Media and All Exposure Routes							2E-05	Total Hazard Index Across All Media and All Exposure Routes					6E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	3E-01
Total Nervous System HI =	4E-01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	9E-03

TABLE 9.43.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-L-7	Methylene chloride	7E-08	--	--	7E-08	Methylene chloride	Liver	3E-03	--	--	3E-03
			Arsenic	4E-06	--	--	4E-06	Arsenic	Skin	1E-01	--	--	1E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E-01	--	--	1E-01
			(total)	4E-06	--	--	4E-06	(Total)		2E-01	--	--	2E-01
Total Risk Across All Media and All Exposure Routes							4E-06	Total Hazard Index Across All Media and All Exposure Routes					2E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E-01
Total Nervous System HI =	1E-01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	3E-03

TABLE 9.44.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-L-9	Methylene chloride	1E-06	--	--	1E-06	Methylene chloride	Liver	2E-02	--	--	2E-02
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	1E-02	--	--	1E-02
			(total)	1E-06	--	--	1E-06	(Total)		3E-02	--	--	3E-02
Total Risk Across All Media and All Exposure Routes							1E-06	Total Hazard Index Across All Media and All Exposure Routes					3E-02

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	N/A
Total Nervous System HI =	1E-02
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	2E-02

TABLE 9.44.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-L-9	Methylene chloride	1E-07	--	--	1E-07	Methylene chloride	Liver	4E-03	--	--	4E-03
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	6E-03	--	--	6E-03
			(total)	1E-07	--	--	1E-07	(Total)		1E-02	--	--	1E-02
Total Risk Across All Media and All Exposure Routes							1E-07	Total Hazard Index Across All Media and All Exposure Routes					1E-02

-- = Not Evaluated
N/A = Not Applicable

Total Skin HI =	N/A
Total Nervous System HI =	6E-03
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	4E-03

TABLE 9.45.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-L-10	Methylene chloride	1E-06	--	--	1E-06	Methylene chloride	Liver	1E-02	--	--	1E-02
			Arsenic	2E-05	--	--	2E-05	Arsenic	Skin	3E-01	--	--	3E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E+01	--	--	1E+01
			(total)	2E-05	--	--	2E-05	(Total)		1E+01	--	--	1E+01
Total Risk Across All Media and All Exposure Routes							2E-05	Total Hazard Index Across All Media and All Exposure Routes					1E+01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	3E-01
Total Nervous System HI =	1E+01
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	1E-02

TABLE 9.45.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-L-10	Methylene chloride	1E-07	--	--	1E-07	Methylene chloride	Liver	4E-03	--	--	4E-03
			Arsenic	5E-06	--	--	5E-06	Arsenic	Skin	2E-01	--	--	2E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	4E+00	--	--	4E+00
			(total)	5E-06	--	--	5E-06	(Total)		4E+00	--	--	4E+00
Total Risk Across All Media and All Exposure Routes							5E-06	Total Hazard Index Across All Media and All Exposure Routes					4E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	2E-01
Total Nervous System HI =	4E+00
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	4E-03

TABLE 9.48.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	On-Site Monitoring Well MW-L-11	Atrazine	3E-05	--	--	3E-05	Atrazine	Whole body	2E-02	--	--	2E-02
			(total)	3E-05	--	--	3E-05	(Total)		2E-02	--	--	2E-02
Total Risk Across All Media and All Exposure Routes							3E-05	Total Hazard Index Across All Media and All Exposure Routes					2E-02

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	N/A
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.46.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient						
				Young Child + Adult					Young Child						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Groundwater	Groundwater	On-Site Monitoring Well MW-L-11	Atrazine	3E-06	--	--	3E-06	Atrazine	Whole body	6E-03	--	--	6E-03		
			(total)	3E-06	--	--	3E-06	(Total)		6E-03	--	--	6E-03		
Total Risk Across All Media and All Exposure Routes							3E-06	Total Hazard Index Across All Media and All Exposure Routes							6E-03

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	N/A
Total Nervous System HI =	N/A
Total Immune System HI =	N/A
Total Kidney HI =	N/A
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.47.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk Young Child + Adult				Chemical	Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	All On-Site Monitoring Wells	1,3-Dichlorobenzene	N/A	--	--	N/A	1,3-Dichlorobenzene	N/A	7E-02	--	--	7E-02
			1,4-Dichlorobenzene	3E-06	--	--	3E-06	1,4-Dichlorobenzene	N/A	3E-02	--	--	3E-02
			Carbon tetrachloride	2E-06	--	--	2E-06	Carbon tetrachloride	Liver	1E-01	--	--	1E-01
			Chlorobenzene	N/A	--	--	N/A	Chlorobenzene	Liver	2E-01	--	--	2E-01
			Methylene chloride	3E-03	--	--	3E-03	Methylene chloride	Liver	3E+01	--	--	3E+01
			Tetrachloroethylene	7E-05	--	--	7E-05	Tetrachloroethylene	Liver	7E-01	--	--	7E-01
			Atrazine	3E-05	--	--	3E-05	Atrazine	Whole body	2E-02	--	--	2E-02
			Pentachlorophenol	2E-06	--	--	2E-06	Pentachlorophenol	Kidney	3E-03	--	--	3E-03
			Heptachlor epoxide	2E-06	--	--	2E-06	Heptachlor epoxide	Liver	1E-01	--	--	1E-01
			Dioxin TEQ	9E-06	--	--	9E-06	Dioxin TEQ	N/A	N/A	--	--	N/A
			Hexavalent Chromium	N/A	--	--	N/A	Hexavalent Chromium	NOAEL	9E-01	--	--	9E-01
			Antimony	N/A	--	--	N/A	Antimony	Blood	8E-01	--	--	8E-01
			Arsenic	2E-03	--	--	2E-03	Arsenic	Skin	2E+01	--	--	2E+01
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	8E-04	--	--	8E-04
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	1E-02	--	--	1E-02
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	4E+01	--	--	4E+01
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	9E+00	--	--	9E+00
			(total)	4E-03	--	--	4E-03	(Total)		1E+02	--	--	1E+02
Total Risk Across All Media and All Exposure Routes				4E-03				Total Hazard Index Across All Media and All Exposure Routes				1E+02	

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	2E+01
Total Nervous System HI =	4E+01
Total Immune System HI =	N/A
Total Kidney HI =	3E-03
Total Blood HI =	8E-01
Total Growth HI =	N/A
Total Liver HI =	3E+01

TABLE 9.47.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)/Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Young Child + Adult					Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	All On-Site Monitoring Wells	1,3-Dichlorobenzene	N/A	--	--	N/A	1,3-Dichlorobenzene	N/A	3E-02	--	--	3E-02
			1,4-Dichlorobenzene	5E-08	--	--	5E-08	1,4-Dichlorobenzene	N/A	1E-03	--	--	1E-03
			Carbon tetrachloride	2E-07	--	--	2E-07	Carbon tetrachloride	Liver	4E-02	--	--	4E-02
			Chlorobenzene	N/A	--	--	N/A	Chlorobenzene	Liver	3E-03	--	--	3E-03
			Methylene chloride	8E-06	--	--	8E-06	Methylene chloride	Liver	3E-01	--	--	3E-01
			Tetrachloroethylene	3E-07	--	--	3E-07	Tetrachloroethylene	Liver	9E-03	--	--	9E-03
			Alrazine	1E-06	--	--	1E-06	Alrazine	Whole body	3E-03	--	--	3E-03
			Pentachlorophenol	4E-07	--	--	4E-07	Pentachlorophenol	Kidney	2E-03	--	--	2E-03
			Heptachlor epoxide	2E-07	--	--	2E-07	Heptachlor epoxide	Liver	2E-02	--	--	2E-02
			Dioxin TEQ	5E-08	--	--	5E-08	Dioxin TEQ	N/A	N/A	--	--	N/A
			Hexavalent Chromium	N/A	--	--	N/A	Hexavalent Chromium	NOAEL	1E-01	--	--	1E-01
			Antimony	N/A	--	--	N/A	Antimony	Blood	1E-01	--	--	1E-01
			Arsenic	2E-05	--	--	2E-05	Arsenic	Skin	6E-01	--	--	6E-01
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	6E-05	--	--	6E-05
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	5E-03	--	--	5E-03
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	3E+00	--	--	3E+00
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	4E-01	--	--	4E-01
			(total)	3E-05	--	--	3E-05	(Total)		4E+00	--	--	4E+00
Total Risk Across All Media and All Exposure Routes							3E-05	Total Hazard Index Across All Media and All Exposure Routes					4E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	6E-01
Total Nervous System HI =	3E+00
Total Immune System HI =	N/A
Total Kidney HI =	2E-03
Total Blood HI =	1E-01
Total Growth HI =	N/A
Total Liver HI =	3E-01

TABLE 9.48.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soils	Soil/Sludge	Lagoon 1	1,2-Dichlorobenzene	N/A	--	--	N/A	1,2-Dichlorobenzene	NOAEL	4E-05	--	--	4E-05		
			1,2-Dichloroethane	9E-09	--	--	9E-09	1,2-Dichloroethane	N/A	9E-06	--	--	9E-06		
			1,3-Dichlorobenzene	N/A	--	--	N/A	1,3-Dichlorobenzene	N/A	2E-04	--	--	2E-04		
			1,4-Dichlorobenzene	3E-09	--	--	3E-09	1,4-Dichlorobenzene	N/A	1E-05	--	--	1E-05		
			Benzene	4E-09	--	--	4E-09	Benzene	N/A	7E-05	--	--	7E-05		
			Bromodichloromethane	6E-09	--	--	6E-09	Bromodichloromethane	Kidney	1E-05	--	--	1E-05		
			Carbon tetrachloride	1E-08	--	--	1E-08	Carbon tetrachloride	Liver	4E-04	--	--	4E-04		
			Chlorobenzene	N/A	--	--	N/A	Chlorobenzene	Liver	2E-05	--	--	2E-05		
			Chloroform	8E-10	--	--	6E-10	Chloroform	Liver	3E-05	--	--	3E-05		
			Tetrachloroethylene	5E-09	--	--	5E-09	Tetrachloroethylene	Liver	3E-05	--	--	3E-05		
			Trichloroethene	7E-10	--	--	7E-10	Trichloroethene	N/A	3E-05	--	--	3E-05		
			Xylene (total)	N/A	--	--	N/A	Xylene (total)	Nervous System	1E-06	--	--	1E-05		
			2-Methylnaphthalene	N/A	--	--	N/A	2-Methylnaphthalene	Body Weight	4E-04	--	--	4E-04		
			4-Methylphenol	N/A	--	--	N/A	4-Methylphenol	Nervous System	1E-03	--	--	1E-03		
			Benzo(a)anthracene	5E-07	--	2E-07	7E-07	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A		
			Benzo(a)pyrene	5E-06	--	2E-06	7E-06	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A		
			Naphthalene	N/A	--	N/A	N/A	Naphthalene	Body Weight	1E-03	--	3E-04	1E-03		
			Pentachlorophenol	1E-06	--	7E-07	2E-05	Pentachlorophenol	Kidney	1E-03	--	6E-04	2E-03		
			Dieldrin	3E-08	--	--	3E-08	Dieldrin	Liver	1E-04	--	--	1E-04		
			Dioxin TEQ	8E-04	--	4E-05	6E-04	Dioxin TEQ	N/A	N/A	--	N/A	N/A		
			Antimony	N/A	--	--	N/A	Antimony	Blood	8E-03	--	--	8E-03		
			Arsenic	4E-06	--	3E-07	5E-06	Arsenic	Skin	3E-02	--	2E-03	3E-02		
			Barium	N/A	--	--	N/A	Barium	NOAEL	6E-03	--	--	6E-03		
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	2E-02	--	5E-03	3E-02		
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	1E+01	--	--	1E+01		
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	6E-06	--	--	6E-06		
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	7E-03	--	--	7E-03		
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	8E-01	--	--	8E-01		
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	1E-01	--	--	1E-01		
			(total)				6E-04	--	4E-05	7E-04	(Total)				1E+01
Total Risk Across All Media and All Exposure Routes							7E-04	Total Hazard Index Across All Media and All Exposure Routes							1E+01

-- = Not Evaluated
N/A = Not Applicable

Total Skin HI =	3E-02
Total Nervous System HI =	8E-01
Total Immune System HI =	N/A
Total Kidney HI =	3E-02
Total Blood HI =	6E-03
Total Growth HI =	N/A
Total Liver HI =	6E-04

TABLE 9.48.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soils	Soil/Sludge	Lagoon 1	1,2-Dichlorobenzene	N/A	--	--	N/A	1,2-Dichlorobenzene	NOAEL	2E-05	--	--	2E-05		
			1,2-Dichloroethane	1E-09	--	--	1E-09	1,2-Dichloroethane	N/A	4E-06	--	--	4E-06		
			1,3-Dichlorobenzene	N/A	--	--	N/A	1,3-Dichlorobenzene	N/A	9E-05	--	--	9E-05		
			1,4-Dichlorobenzene	4E-10	--	--	4E-10	1,4-Dichlorobenzene	N/A	5E-06	--	--	5E-06		
			Benzene	6E-10	--	--	6E-10	Benzene	N/A	3E-05	--	--	3E-05		
			Bromodichloromethane	1E-09	--	--	1E-09	Bromodichloromethane	Kidney	8E-06	--	--	8E-06		
			Carbon tetrachloride	2E-09	--	--	2E-09	Carbon tetrachloride	Liver	2E-04	--	--	2E-04		
			Chlorobenzene	N/A	--	--	N/A	Chlorobenzene	Liver	7E-06	--	--	7E-06		
			Chloroform	1E-10	--	--	1E-10	Chloroform	Liver	1E-05	--	--	1E-05		
			Tetrachloroethylene	8E-10	--	--	8E-10	Tetrachloroethylene	Liver	1E-05	--	--	1E-05		
			Trichloroethene	1E-10	--	--	1E-10	Trichloroethene	N/A	1E-05	--	--	1E-05		
			Xylene (total)	N/A	--	--	N/A	Xylene (total)	Nervous System	5E-06	--	--	5E-06		
			2-Methylnaphthalene	N/A	--	--	N/A	2-Methylnaphthalene	Body Weight	2E-04	--	--	2E-04		
			4-Methylphenol	N/A	--	--	N/A	4-Methylphenol	Nervous System	6E-04	--	--	6E-04		
			Benzo(a)anthracene	8E-08	--	5E-08	1E-07	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A		
			Benzo(a)pyrene	8E-07	--	5E-07	1E-06	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A		
			Naphthalene	N/A	--	N/A	N/A	Naphthalene	Body Weight	5E-04	--	3E-04	8E-04		
			Pentachlorophenol	2E-07	--	2E-07	4E-07	Pentachlorophenol	Kidney	4E-04	--	5E-04	9E-04		
			Dieldrin	5E-09	--	--	5E-09	Dieldrin	Liver	5E-05	--	--	5E-05		
			Dioxin TEQ	1E-06	--	2E-06	2E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A		
			Antimony	N/A	--	--	N/A	Antimony	Blood	4E-03	--	--	4E-03		
			Arsenic	7E-07	--	1E-07	8E-07	Arsenic	Skin	1E-02	--	2E-03	1E-02		
			Barium	N/A	--	--	N/A	Barium	NOAEL	3E-03	--	--	3E-03		
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	9E-03	--	4E-03	1E-02		
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	4E+00	--	--	4E+00		
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	2E-05	--	--	2E-05		
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	3E-03	--	--	3E-03		
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	4E-02	--	--	4E-02		
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	5E-02	--	--	5E-02		
			(total)				2E-05	--	3E-06	2E-05	(Total)		5E+00	--	7E-03
Total Risk Across All Media and All Exposure Routes							2E-05	Total Hazard Index Across All Media and All Exposure Routes							5E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E-02
Total Nervous System HI =	4E-02
Total Immune System HI =	N/A
Total Kidney HI =	1E-02
Total Blood HI =	4E-03
Total Growth HI =	N/A
Total Liver HI =	3E-04

TABLE 9.49.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 2	Acetophenone	N/A	--	--	N/A	Acetophenone	NOAEL	8E-07	--	--	8E-07
			Dioxin TEQ	8E-06	--	6E-07	9E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	2E-06	--	2E-07	2E-06	Arsenic	Skin	1E-02	--	1E-03	2E-02
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	2E-03	--	5E-04	3E-03
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	2E-01	--	--	2E-01
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	9E-05	--	--	9E-05
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	2E-02	--	--	2E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	4E-03	--	--	4E-03
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	2E-02	--	--	2E-02
			(total)	1E-05	--	7E-07	1E-05	(Total)		2E-01	--	1E-03	2E-01
Total Risk Across All Media and All Exposure Routes						1E-05	Total Hazard Index Across All Media and All Exposure Routes						2E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	2E-02
Total Nervous System HI =	3E-02
Total Immune System HI =	N/A
Total Kidney HI =	3E-03
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.49.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 2	Acetophenone	N/A	--	--	N/A	Acetophenone	NOAEL	3E-07	--	--	3E-07
			Dioxin TEQ	1E-06	--	2E-07	1E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	4E-07	--	5E-08	4E-07	Arsenic	Skin	6E-03	--	9E-04	7E-03
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	9E-04	--	4E-04	1E-03
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	8E-02	--	--	8E-02
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	4E-05	--	--	4E-05
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E-02	--	--	1E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	2E-03	--	--	2E-03
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	1E-02	--	--	1E-02
			{total}	2E-06	--	2E-07	2E-06	{Total}		1E-01	--	1E-03	1E-01
Total Risk Across All Media and All Exposure Routes						2E-06	Total Hazard Index Across All Media and All Exposure Routes						1E-01

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	7E-03
Total Nervous System HI =	1E-02
Total Immune System HI =	N/A
Total Kidney HI =	1E-03
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.50.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 3	Dioxin TEQ	1E-04	--	9E-06	1E-04	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	--	N/A	Antimony	Blood	7E-03	--	--	7E-03
			Arsenic	4E-06	--	3E-07	5E-06	Arsenic	Skin	3E-02	--	2E-03	3E-02
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	4E-02	--	1E-02	5E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	6E+00	--	--	6E+00
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	2E-02	--	--	2E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	1E-01	--	--	1E-01
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	7E-03	--	--	7E-03
			(total)	1E-04	--	1E-05	1E-04	(Total)		6E+00	--	1E-02	6E+00
Total Risk Across All Media and All Exposure Routes						1E-04	Total Hazard Index Across All Media and All Exposure Routes						6E+00

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	3E-02
Total Nervous System HI =	1E-01
Total Immune System HI =	N/A
Total Kidney HI =	5E-02
Total Blood HI =	7E-03
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.50.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 3	Dioxin TEQ	2E-06	--	3E-07	2E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	--	N/A	Antimony	Blood	3E-03	--	--	3E-03
			Arsenic	7E-07	--	9E-08	6E-07	Arsenic	Skin	1E-02	--	2E-03	1E-02
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	2E-02	--	8E-03	3E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	7E-01	--	--	7E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E-02	--	--	1E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	5E-02	--	--	5E-02
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	3E-03	--	--	3E-03
			(total)	3E-06	--	4E-07	3E-06	(Total)		8E-01	--	1E-02	8E-01
Total Risk Across All Media and All Exposure Routes						3E-06	Total Hazard Index Across All Media and All Exposure Routes					8E-01	

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	1E-02
Total Nervous System HI =	6E-02
Total Immune System HI =	N/A
Total Kidney HI =	3E-02
Total Blood HI =	3E-03
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.51.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 4	Benzo(a)anthracene	5E-08	--	2E-08	7E-08	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	5E-07	--	2E-07	7E-07	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	5E-08	--	2E-08	7E-08	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	5E-07	--	2E-07	7E-07	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	5E-08	--	2E-08	7E-08	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A
			Naphthalene	N/A	--	N/A	N/A	Naphthalene	Body Weight	1E-05	--	3E-06	1E-05
			Pentachlorophenol	2E-08	--	1E-08	4E-08	Pentachlorophenol	Kidney	2E-05	--	1E-05	3E-05
			Dioxin TEQ	4E-05	--	3E-06	4E-05	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	2E-06	--	2E-07	3E-06	Arsenic	Skin	2E-02	--	1E-03	2E-02
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	2E-04	--	5E-05	3E-04
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	2E-02	--	--	2E-02
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	7E-03	--	--	7E-03
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	2E-03	--	--	2E-03
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	3E-02	--	--	3E-02
			(total)	4E-05	--	3E-06	5E-05	(Total)		8E-02	--	1E-03	8E-02
Total Risk Across All Media and All Exposure Routes						5E-05	Total Hazard Index Across All Media and All Exposure Routes						8E-02

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	2E-02
Total Nervous System HI =	9E-03
Total Immune System HI =	N/A
Total Kidney HI =	3E-04
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.51.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 4	Benzo(a)anthracene	9E-09	--	5E-09	1E-08	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	9E-08	--	5E-08	1E-07	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Benzo(b)fluoranthene	9E-09	--	5E-09	1E-08	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A
			Dibenz(a,h)anthracene	9E-08	--	5E-08	1E-07	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A
			Indeno(1,2,3-cd)pyrene	9E-09	--	5E-09	1E-08	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A
			Naphthalene	N/A	--	N/A	N/A	Naphthalene	Body Weight	5E-06	--	3E-06	7E-06
			Pentachlorophenol	4E-09	--	4E-09	8E-09	Pentachlorophenol	Kidney	8E-06	--	9E-06	2E-05
			Dioxin TEQ	1E-06	--	2E-07	1E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Arsenic	4E-07	--	5E-08	4E-07	Arsenic	Skin	7E-03	--	9E-04	7E-03
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	1E-04	--	5E-05	1E-04
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	1E-02	--	--	1E-02
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	3E-03	--	--	3E-03
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	9E-04	--	--	9E-04
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	1E-02	--	--	1E-02
(total)				2E-06	--	3E-07	2E-06	(Total)		3E-02	--	1E-03	3E-02
Total Risk Across All Media and All Exposure Routes						2E-06	Total Hazard Index Across All Media and All Exposure Routes						3E-02

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	7E-03
Total Nervous System HI =	4E-03
Total Immune System HI =	N/A
Total Kidney HI =	2E-04
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.52.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soils	Soil/Sludge	Lagoon 5	Benzo(a)pyrene	8E-07	--	2E-07	1E-06	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A		
			bis(2-Chloroethoxy)methane	N/A	--	--	N/A	bis(2-Chloroethoxy)methane	N/A	N/A	--	--	N/A		
			Bis(2-chloroethyl)ether	1E-07	--	--	1E-07	Bis(2-chloroethyl)ether	N/A	N/A	--	--	N/A		
			N-Nitroso-di-n-propylamine	1E-06	--	--	1E-06	N-Nitroso-di-n-propylamine	N/A	N/A	--	--	N/A		
			Nitrobenzene	N/A	--	--	N/A	Nitrobenzene	Blood	5E-04	--	--	5E-04		
			Pentachlorophenol	3E-08	--	1E-08	4E-08	Pentachlorophenol	Kidney	2E-05	--	1E-05	3E-05		
			Aroclor 1248	4E-08	--	1E-08	6E-08	Aroclor 1248	Immune System	3E-03	--	9E-04	4E-03		
			Dioxin TEQ	1E-04	--	7E-06	1E-04	Dioxin TEQ	N/A	N/A	--	N/A	N/A		
			Antimony	N/A	--	--	N/A	Antimony	Blood	2E-02	--	--	2E-02		
			Arsenic	3E-06	--	2E-07	3E-06	Arsenic	Skin	2E-02	--	1E-03	2E-02		
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	1E-02	--	2E-03	1E-02		
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	3E+00	--	--	3E+00		
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	2E-02	--	--	2E-02		
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	6E-02	--	--	5E-02		
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	2E-01	--	--	2E-01		
			(total)				1E-04	--	7E-06	1E-04	(Total)				3E+00
Total Risk Across All Media and All Exposure Routes						1E-04		Total Hazard Index Across All Media and All Exposure Routes						3E+00	

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	2E-02
Total Nervous System HI =	6E-02
Total Immune System HI =	4E-03
Total Kidney HI =	1E-02
Total Blood HI =	2E-02
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.52.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNAI TANNERY

Scenario Timeframe: Future
Receptor Population: Commercial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soils	Soil/Sludge	Lagoon 5	Benzo(a)pyrene	9E-08	--	5E-08	1E-07	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A		
			bis(2-Chloroethoxy)methane	N/A	--	--	N/A	bis(2-Chloroethoxy)methane	N/A	N/A	--	--	N/A		
			Bis(2-chloroethyl)ether	2E-08	--	--	2E-08	Bis(2-chloroethyl)ether	N/A	N/A	--	--	N/A		
			N-Nitroso-di-n-propylamine	1E-07	--	--	1E-07	N-Nitroso-di-n-propylamine	N/A	N/A	--	--	N/A		
			Nitrobenzene	N/A	--	--	N/A	Nitrobenzene	Blood	2E-04	--	--	2E-04		
			Pentachlorophenol	4E-09	--	5E-09	9E-09	Pentachlorophenol	Kldney	9E-06	--	1E-05	2E-05		
			Aroclor 1248	7E-08	--	4E-09	1E-08	Aroclor 1248	Immune System	1E-03	--	6E-04	2E-03		
			Dioxin TEQ	2E-05	--	2E-06	2E-05	Dioxin TEQ	N/A	N/A	--	N/A	N/A		
			Antimony	N/A	--	--	N/A	Antimony	Blood	9E-03	--	--	9E-03		
			Arsenic	2E-07	--	3E-08	2E-07	Arsenic	Skin	3E-03	--	4E-04	4E-03		
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	4E-03	--	2E-03	6E-03		
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	1E+00	--	--	1E+00		
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	7E-03	--	--	7E-03		
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	6E-03	--	--	6E-03		
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	7E-02	--	--	7E-02		
			(total)				2E-05	--	2E-06	2E-05	(Total)				1E+00
Total Risk Across All Media and All Exposure Routes						2E-05		Total Hazard Index Across All Media and All Exposure Routes						1E+00	

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	4E-03
Total Nervous System HI =	1E-02
Total Immune System HI =	2E-03
Total Kidney HI =	6E-03
Total Blood HI =	9E-03
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.53.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 1	1,2-Dichlorobenzene	N/A	--	--	N/A	1,2-Dichlorobenzene	NOAEL	2E-05	--	--	2E-05
			1,2-Dichloroethane	2E-10	--	--	2E-10	1,2-Dichloroethane	N/A	5E-06	--	--	5E-06
			1,3-Dichlorobenzene	N/A	--	--	N/A	1,3-Dichlorobenzene	N/A	1E-04	--	--	1E-04
			1,4-Dichlorobenzene	6E-11	--	--	6E-11	1,4-Dichlorobenzene	N/A	8E-06	--	--	8E-06
			Benzene	9E-11	--	--	9E-11	Benzene	N/A	4E-05	--	--	4E-05
			Bromodichloromethane	1E-10	--	--	1E-10	Bromodichloromethane	Kidney	7E-06	--	--	7E-06
			Carbon tetrachloride	3E-10	--	--	3E-10	Carbon tetrachloride	Liver	2E-04	--	--	2E-04
			Chlorobenzene	N/A	--	--	N/A	Chlorobenzene	Liver	9E-05	--	--	9E-05
			Chloroform	1E-11	--	--	1E-11	Chloroform	Liver	1E-05	--	--	1E-05
			Tetrachloroethylene	1E-10	--	--	1E-10	Tetrachloroethylene	Liver	1E-05	--	--	1E-05
			Trichloroethene	2E-11	--	--	2E-11	Trichloroethene	N/A	2E-05	--	--	2E-05
			Xylene (total)	N/A	--	--	N/A	Xylene (total)	Nervous System	6E-06	--	--	6E-06
			2-Methylnaphthalene	N/A	--	--	N/A	2-Methylnaphthalene	Body Weight	2E-04	--	--	2E-04
			4-Methylphenol	N/A	--	--	N/A	4-Methylphenol	Nervous System	7E-04	--	--	7E-04
			Benzo(a)anthracene	1E-08	--	5E-09	2E-08	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	1E-07	--	5E-08	2E-07	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Naphthalene	N/A	--	N/A	N/A	Naphthalene	Body Weight	6E-04	--	3E-04	8E-04
			Pentachlorophenol	3E-08	--	2E-08	5E-08	Pentachlorophenol	Kidney	5E-04	--	4E-04	9E-04
			Dieldrin	7E-10	--	--	7E-10	Dieldrin	Liver	8E-05	--	--	6E-05
			Dioxin TEQ	1E-05	--	1E-06	1E-05	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	--	N/A	Antimony	Blood	4E-03	--	--	4E-03
			Arsenic	9E-08	--	9E-09	1E-07	Arsenic	Skin	1E-02	--	1E-03	2E-02
			Barium	N/A	--	--	N/A	Barium	NOAEL	3E-03	--	--	3E-03
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	1E-02	--	4E-03	1E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	5E+00	--	--	5E+00
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	3E-05	--	--	3E-05
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	4E-03	--	--	4E-03
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	4E-01	--	--	4E-01
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	8E-02	--	--	8E-02
			(total)	1E-05	--	1E-06	1E-05	(Total)		6E+00	--	6E-03	6E+00

TABLE 9.53.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Lagoon 1	Arsenic	--	--	4E-10	4E-10	Arsenic	Skin	--	--	7E-05	7E-05
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	9E-03	9E-03
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	1E-04	1E-04
			Thallium	--	--	N/A	N/A	Thallium	NOAEL	--	--	2E-04	2E-04
			(total)	--	--	4E-10	4E-10	(Total)		--	--	1E-02	1E-02
Soil/ Groundwater	Air	Lagoons (1 through 5)	1,2-Dichlorobenzene	--	N/A	--	N/A	1,2-Dichlorobenzene	NOAEL	--	N/A	--	N/A
			1,2-Dichloroethane	--	2E-10	--	2E-10	1,2-Dichloroethane	N/A	--	N/A	--	N/A
			1,3-Dichlorobenzene	--	N/A	--	N/A	1,3-Dichlorobenzene	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	N/A	1,4-Dichlorobenzene	N/A	--	2E-06	--	2E-06
			Benzene	--	6E-11	--	6E-11	Benzene	N/A	--	N/A	--	N/A
			Bromodichloromethane	--	N/A	--	N/A	Bromodichloromethane	Kidney	--	N/A	--	N/A
			Carbon tetrachloride	--	9E-10	--	9E-10	Carbon tetrachloride	Liver	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	N/A	Chlorobenzene	Liver	--	N/A	--	N/A
			Chloroform	--	1E-09	--	1E-09	Chloroform	Liver	--	N/A	--	N/A
			Methylene chloride	--	8E-14	--	8E-14	Methylene chloride	Liver	--	N/A	--	N/A
			Tetrachloroethylene	--	3E-11	--	3E-11	Tetrachloroethylene	Liver	--	N/A	--	N/A
			Trichloroethene	--	5E-11	--	5E-11	Trichloroethene	N/A	--	N/A	--	N/A
			Xylene (total)	--	N/A	--	N/A	Xylene (total)	Nervous System	--	N/A	--	N/A
			(total)	--	3E-09	--	3E-09	(Total)		--	2E-06	--	2E-06
Total Risk Across Soil/Sludge							1E-05	Total Hazard Index Across All Media and All Exposure Routes					5E+00
Total Risk Across Surface Water							4E-10						
Total Risk Across Air							3E-09						
Total Risk Across All Media and All Exposure Routes							1E-05						
								Total Skin HI =					2E-02
								Total Nervous System HI =					5E-01
-- = Not Evaluated													
N/A = Not Applicable													

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	2E-02
Total Nervous System HI =	5E-01
Total Immune System HI =	1E-04
Total Kidney HI =	2E-02
Total Blood HI =	4E-03
Total Growth HI =	N/A
Total Liver HI =	3E-04

TABLE 9.53.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 1	1,2-Dichlorobenzene	N/A	--	--	N/A	1,2-Dichlorobenzene	NOAEL	8E-08	--	--	8E-08
			1,2-Dichloroethane	6E-11	--	--	6E-11	1,2-Dichloroethane	N/A	2E-06	--	--	2E-06
			1,3-Dichlorobenzene	N/A	--	--	N/A	1,3-Dichlorobenzene	N/A	4E-06	--	--	4E-06
			1,4-Dichlorobenzene	2E-11	--	--	2E-11	1,4-Dichlorobenzene	N/A	2E-06	--	--	2E-06
			Benzene	3E-11	--	--	3E-11	Benzene	N/A	1E-05	--	--	1E-05
			Bromodichloromethane	4E-11	--	--	4E-11	Bromodichloromethane	Kidney	2E-06	--	--	2E-06
			Carbon tetrachloride	9E-11	--	--	9E-11	Carbon tetrachloride	Liver	7E-05	--	--	7E-05
			Chlorobenzene	N/A	--	--	N/A	Chlorobenzene	Liver	3E-06	--	--	3E-06
			Chloroform	4E-12	--	--	4E-12	Chloroform	Liver	5E-06	--	--	5E-06
			Tetrachloroethylene	4E-11	--	--	4E-11	Tetrachloroethylene	Liver	5E-06	--	--	5E-06
			Trichloroethene	5E-12	--	--	5E-12	Trichloroethene	N/A	5E-06	--	--	5E-06
			Xylene (total)	N/A	--	--	N/A	Xylene (total)	Nervous System	2E-06	--	--	2E-06
			2-Methylnaphthalene	N/A	--	--	N/A	2-Methylnaphthalene	Body Weight	6E-05	--	--	6E-05
			4-Methylphenol	N/A	--	--	N/A	4-Methylphenol	Nervous System	2E-04	--	--	2E-04
			Benzo(a)anthracene	4E-09	--	2E-09	5E-09	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A
			Benzo(a)pyrene	4E-08	--	2E-08	5E-08	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A
			Naphthalene	N/A	--	N/A	N/A	Naphthalene	Body Weight	2E-04	--	8E-05	3E-04
			Pentachlorophenol	9E-09	--	7E-09	2E-08	Pentachlorophenol	Kidney	2E-04	--	1E-04	3E-04
			Dieldrin	2E-10	--	--	2E-10	Dieldrin	Liver	2E-05	--	--	2E-05
			Dioxin TEQ	7E-07	--	7E-08	7E-07	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	--	N/A	Antimony	Blood	1E-03	--	--	1E-03
			Arsenic	3E-08	--	3E-09	3E-08	Arsenic	Skin	5E-03	--	5E-04	5E-03
			Barium	N/A	--	--	N/A	Barium	NOAEL	1E-03	--	--	1E-03
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	4E-03	--	1E-03	5E-03
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	2E+00	--	--	2E+00
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	1E-05	--	--	1E-05
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E-03	--	--	1E-03
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	2E-02	--	--	2E-02
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	2E-02	--	--	2E-02
			(total)	7E-07	--	9E-08	8E-07	(Total)		2E+00	--	2E-03	2E+00

TABLE 9.53.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Lagoon 1	Arsenic	--	--	7E-11	7E-11	Arsenic	Skin	--	--	1E-05	1E-05
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	2E-03	2E-03
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	2E-05	2E-05
			Thallium	--	--	N/A	N/A	Thallium	NOAEL	--	--	3E-05	3E-05
			(total)	--	--	7E-11	7E-11	(Total)		--	--	2E-03	2E-03
Soil/ Groundwater	Air	Lagoons (1 through 5)	1,2-Dichlorobenzene	--	N/A	--	N/A	1,2-Dichlorobenzene	NOAEL	--	N/A	--	N/A
			1,2-Dichloroethane	--	6E-11	--	6E-11	1,2-Dichloroethane	N/A	--	N/A	--	N/A
			1,3-Dichlorobenzene	--	N/A	--	N/A	1,3-Dichlorobenzene	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	N/A	1,4-Dichlorobenzene	N/A	--	7E-07	--	7E-07
			Benzene	--	2E-11	--	2E-11	Benzene	N/A	--	N/A	--	N/A
			Bromodichloromethane	--	N/A	--	N/A	Bromodichloromethane	Kidney	--	N/A	--	N/A
			Carbon tetrachloride	--	3E-10	--	3E-10	Carbon tetrachloride	Liver	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	N/A	Chlorobenzene	Liver	--	N/A	--	N/A
			Chloroform	--	5E-10	--	5E-10	Chloroform	Liver	--	N/A	--	N/A
			Methylene chloride	--	3E-14	--	3E-14	Methylene chloride	Liver	--	N/A	--	N/A
			Tetrachloroethylene	--	9E-12	--	9E-12	Tetrachloroethylene	Liver	--	N/A	--	N/A
			Trichloroethene	--	2E-11	--	2E-11	Trichloroethene	N/A	--	N/A	--	N/A
			Xylene (total)	--	N/A	--	N/A	Xylene (total)	Nervous System	--	N/A	--	N/A
			(total)	--	9E-10	--	9E-10	(Total)		--	7E-07	--	7E-07
Total Risk Across Soil/Sludge							8E-07	Total Hazard Index Across All Media and All Exposure Routes					2E+00

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across Surface Water

7E-11

9E-10

8E-07

Total Risk Across All Media and All Exposure Routes

Total Skin HI =

5E-03

Total Nervous System HI =

2E-02

Total Immune System HI =

2E-05

Total Kidney HI =

5E-03

Total Blood HI =

1E-03

Total Growth HI =

N/A

Total Liver HI =

1E-04

TABLE 9.54.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soils	Soil/Sludge	Lagoon 2	Acetophenone	N/A	--	--	N/A	Acetophenone	NOAEL	4E-07	--	--	4E-07		
			Dioxin TEQ	2E-07	--	2E-08	2E-07	Dioxin TEQ	N/A	N/A	--	N/A	N/A		
			Arsenic	5E-05	--	5E-09	5E-05	Arsenic	Skin	8E-03	--	8E-04	8E-03		
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	1E-03	--	4E-04	2E-03		
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	1E-01	--	--	1E-01		
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	5E-05	--	--	5E-05		
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E-02	--	--	1E-02		
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	2E-03	--	--	2E-03		
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	1E-02	--	--	1E-02		
(total)			2E-07	--	2E-08	2E-07	(Total)		1E-01	--	1E-03	1E-01			
Surface Water	Surface Water	Lagoon 2	Dioxin TEQ	--	--	3E-08	3E-08	Dioxin TEQ	N/A	--	--	N/A	N/A		
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	7E-03	7E-03		
			(total)	--	--	3E-08	3E-08	(Total)		--	--	7E-03	7E-03		
Soil/ Groundwater	Air	Lagoons (1 through 5)	1,2-Dichlorobenzene	--	N/A	--	N/A	1,2-Dichlorobenzene	NOAEL	--	N/A	--	N/A		
			1,2-Dichloroethane	--	2E-10	--	2E-10	1,2-Dichloroethane	N/A	--	N/A	--	N/A		
			1,3-Dichlorobenzene	--	N/A	--	N/A	1,3-Dichlorobenzene	N/A	--	N/A	--	N/A		
			1,4-Dichlorobenzene	--	N/A	--	N/A	1,4-Dichlorobenzene	N/A	--	2E-06	--	2E-06		
			Benzene	--	6E-11	--	6E-11	Benzene	N/A	--	N/A	--	N/A		
			Bromodichloromethane	--	N/A	--	N/A	Bromodichloromethane	Kidney	--	N/A	--	N/A		
			Carbon tetrachloride	--	9E-10	--	9E-10	Carbon tetrachloride	Liver	--	N/A	--	N/A		
			Chlorobenzene	--	N/A	--	N/A	Chlorobenzene	Liver	--	N/A	--	N/A		
			Chloroform	--	1E-09	--	1E-09	Chloroform	Liver	--	N/A	--	N/A		
			Methylene chloride	--	8E-14	--	8E-14	Methylene chloride	Liver	--	N/A	--	N/A		
			Tetrachloroethylene	--	3E-11	--	3E-11	Tetrachloroethylene	Liver	--	N/A	--	N/A		
			Trichloroethene	--	5E-11	--	5E-11	Trichloroethene	N/A	--	N/A	--	N/A		
			Xylene (total)	--	N/A	--	N/A	Xylene (total)	Nervous System	--	N/A	--	N/A		
			(total)			--	3E-09	--	3E-09	(Total)		--	2E-06	--	2E-06
Total Risk Across Soil/Sludge							2E-07	Total Hazard Index Across All Media and All Exposure Routes							1E-01
Total Risk Across Surface Water							3E-08								
Total Risk Across Air							3E-09								
Total Risk Across All Media and All Exposure Routes							3E-07								
								Total Skin HI =							6E-03
								Total Nervous System HI =							2E-02
								Total Immune System HI =							N/A
								Total Kidney HI =							2E-03
								Total Blood HI =							N/A
								Total Growth HI =							N/A
								Total Liver HI =							N/A

-- = Not Evaluated
N/A = Not Applicable

-- = Not Evaluated
N/A = Not Applicable

TABLE 9.54.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY
POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soils	Soil/Sludge	Lagoon 2	Acetophenone	N/A	--	--	N/A	Acetophenone	NOAEL	1E-07	--	--	1E-07		
			Dioxin TEQ	6E-08	--	6E-09	6E-08	Dioxin TEQ	N/A	N/A	--	N/A	N/A		
			Arsenic	2E-08	--	2E-09	2E-08	Arsenic	Skin	3E-03	--	3E-04	3E-03		
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	4E-04	--	1E-04	6E-04		
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	3E-02	--	--	3E-02		
			Cyanide	N/A	--	--	N/A	Cyanide	Nervous System	2E-05	--	--	2E-05		
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	4E-03	--	--	4E-03		
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	7E-04	--	--	7E-04		
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	4E-03	--	--	4E-03		
(total)				7E-08	--	7E-09	8E-08	(Total)				4E-02	--	4E-04	4E-02
Surface Water	Surface Water	Lagoon 2	Dioxin TEQ	--	--	7E-09	7E-09	Dioxin TEQ	N/A	--	--	N/A	N/A		
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	1E-03	1E-03		
			(total)				--	--	7E-09	7E-09	(Total)				--
Soil/ Groundwater	Air	Lagoons (1 through 5)	1,2-Dichlorobenzene	--	N/A	--	N/A	1,2-Dichlorobenzene	NOAEL	--	N/A	--	N/A		
			1,2-Dichloroethane	--	6E-11	--	6E-11	1,2-Dichloroethane	N/A	--	N/A	--	N/A		
			1,3-Dichlorobenzene	--	N/A	--	N/A	1,3-Dichlorobenzene	N/A	--	N/A	--	N/A		
			1,4-Dichlorobenzene	--	N/A	--	N/A	1,4-Dichlorobenzene	N/A	--	7E-07	--	7E-07		
			Benzene	--	2E-11	--	2E-11	Benzene	N/A	--	N/A	--	N/A		
			Bromodichloromethane	--	N/A	--	N/A	Bromodichloromethane	Kidney	--	N/A	--	N/A		
			Carbon tetrachloride	--	3E-10	--	3E-10	Carbon tetrachloride	Liver	--	N/A	--	N/A		
			Chlorobenzene	--	N/A	--	N/A	Chlorobenzene	Liver	--	N/A	--	N/A		
			Chloroform	--	5E-10	--	5E-10	Chloroform	Liver	--	N/A	--	N/A		
			Methylene chloride	--	3E-14	--	3E-14	Methylene chloride	Liver	--	N/A	--	N/A		
			Tetrachloroethylene	--	9E-12	--	9E-12	Tetrachloroethylene	Liver	--	N/A	--	N/A		
			Trichloroethene	--	2E-11	--	2E-11	Trichloroethene	N/A	--	N/A	--	N/A		
			Xylene (total)	--	N/A	--	N/A	Xylene (total)	Nervous System	--	N/A	--	N/A		
			(total)				--	9E-10	--	9E-10	(Total)				--
Total Risk Across Soil/Sludge							8E-08	Total Hazard Index Across All Media and All Exposure Routes							5E-02
Total Risk Across Surface Water							7E-09								
Total Risk Across Air							9E-10								
Total Risk Across All Media and All Exposure Routes							9E-08								

-- = Not Evaluated

N/A = Not Applicable

Total Skin HI =	3E-03
Total Nervous System HI =	6E-03
Total Immune System HI =	N/A
Total Kidney HI =	5E-04
Total Blood HI =	N/A
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.55.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 3	Dioxin TEQ	3E-06	--	3E-07	3E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	--	N/A	Antimony	Blood	4E-03	--	--	4E-03
			Arsenic	9E-08	--	9E-09	1E-07	Arsenic	Skin	1E-02	--	1E-03	2E-02
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	2E-02	--	7E-03	3E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	3E+00	--	--	3E+00
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E-02	--	--	1E-02
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	6E-02	--	--	6E-02
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	4E-03	--	--	4E-03
			(total)	3E-06	--	3E-07	3E-06	(Total)		3E+00	--	9E-03	3E+00
Soil/ Groundwater	Air	Lagoons (1 through 5)	1,2-Dichlorobenzene	--	N/A	--	N/A	1,2-Dichlorobenzene	NOAEL	--	N/A	--	N/A
			1,2-Dichloroethane	--	2E-10	--	2E-10	1,2-Dichloroethane	N/A	--	N/A	--	N/A
			1,3-Dichlorobenzene	--	N/A	--	N/A	1,3-Dichlorobenzene	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	N/A	1,4-Dichlorobenzene	N/A	--	2E-06	--	2E-06
			Benzene	--	6E-11	--	6E-11	Benzene	N/A	--	N/A	--	N/A
			Bromodichloromethane	--	N/A	--	N/A	Bromodichloromethane	Kidney	--	N/A	--	N/A
			Carbon tetrachloride	--	9E-10	--	9E-10	Carbon tetrachloride	Liver	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	N/A	Chlorobenzene	Liver	--	N/A	--	N/A
			Chloroform	--	1E-09	--	1E-09	Chloroform	Liver	--	N/A	--	N/A
			Methylene chloride	--	8E-14	--	8E-14	Methylene chloride	Liver	--	N/A	--	N/A
			Tetrachloroethylene	--	3E-11	--	3E-11	Tetrachloroethylene	Liver	--	N/A	--	N/A
			Trichloroethane	--	5E-11	--	5E-11	Trichloroethane	N/A	--	N/A	--	N/A
			Xylene (total)	--	N/A	--	N/A	Xylene (total)	Nervous System	--	N/A	--	N/A
			(total)	--	3E-09	--	3E-09	(Total)		--	2E-06	--	2E-06

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across Soil/Sludge
3E-06
Total Risk Across Air
3E-09
Total Risk Across All Media and All Exposure Routes
3E-06

Total Hazard Index Across All Media and All Exposure Routes
3E+00

Total Skin HI = 2E-02
Total Nervous System HI = 7E-02
Total Immune System HI = N/A
Total Kidney HI = 3E-02
Total Blood HI = 4E-03
Total Growth HI = N/A
Total Liver HI = N/A

TABLE 9.55.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soils	Soil/Sludge	Lagoon 3	Dioxin TEQ	9E-08	--	9E-09	1E-07	Dioxin TEQ	N/A	N/A	--	N/A	N/A
			Antimony	N/A	--	--	N/A	Antimony	Blood	1E-03	--	--	1E-03
			Arsenic	3E-08	--	3E-09	3E-08	Arsenic	Skin	5E-03	--	5E-04	5E-03
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	7E-03	--	2E-03	1E-02
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	3E-01	--	--	3E-01
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	4E-03	--	--	4E-03
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	2E-02	--	--	2E-02
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	1E-03	--	--	1E-03
			(total)	1E-07	--	1E-08	1E-07	(Total)		3E-01	--	3E-03	3E-01
Soil/ Groundwater	Air	Lagoons (1 through 5)	1,2-Dichlorobenzene	--	N/A	--	N/A	1,2-Dichlorobenzene	NOAEL	--	N/A	--	N/A
			1,2-Dichloroethane	--	6E-11	--	6E-11	1,2-Dichloroethane	N/A	--	N/A	--	N/A
			1,3-Dichlorobenzene	--	N/A	--	N/A	1,3-Dichlorobenzene	N/A	--	N/A	--	N/A
			1,4-Dichlorobenzene	--	N/A	--	N/A	1,4-Dichlorobenzene	N/A	--	7E-07	--	7E-07
			Benzene	--	2E-11	--	2E-11	Benzene	N/A	--	N/A	--	N/A
			Bromodichloromethane	--	N/A	--	N/A	Bromodichloromethane	Kidney	--	N/A	--	N/A
			Carbon tetrachloride	--	3E-10	--	3E-10	Carbon tetrachloride	Liver	--	N/A	--	N/A
			Chlorobenzene	--	N/A	--	N/A	Chlorobenzene	Liver	--	N/A	--	N/A
			Chloroform	--	5E-10	--	5E-10	Chloroform	Liver	--	N/A	--	N/A
			Methylene chloride	--	3E-14	--	3E-14	Methylene chloride	Liver	--	N/A	--	N/A
			Tetrachloroethylene	--	9E-12	--	9E-12	Tetrachloroethylene	Liver	--	N/A	--	N/A
			Trichloroethene	--	2E-11	--	2E-11	Trichloroethene	N/A	--	N/A	--	N/A
			Xylene (total)	--	N/A	--	N/A	Xylene (total)	Nervous System	--	N/A	--	N/A
			(total)	--	9E-10	--	9E-10	(Total)		--	7E-07	--	7E-07
			Total Risk Across Soil/Sludge	1E-07				Total Hazard Index Across All Media and All Exposure Routes					3E-01

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across Air
Total Risk Across All Media and All Exposure Routes

1E-07
9E-10
1E-07

Total Skin HI =	5E-03
Total Nervous System HI =	2E-02
Total Immune System HI =	N/A
Total Kidney HI =	1E-02
Total Blood HI =	1E-03
Total Growth HI =	N/A
Total Liver HI =	N/A

TABLE 9.56.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCA
REASONABLE MAXIMUM EXPOSURES

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soils	Soil/Sludge	Lagoon 4	Benzo(a)anthracene	1E-09	--	5E-10	2E-09	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A		
			Benzo(a)pyrene	1E-09	--	5E-09	2E-09	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A		
			Benzo(b)fluoranthene	1E-09	--	5E-10	2E-09	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A		
			Dibenz(a,h)anthracene	1E-09	--	5E-09	2E-09	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A		
			Indeno(1,2,3-cd)pyrene	1E-09	--	5E-10	2E-09	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A		
			Naphthalene	N/A	--	N/A	N/A	Naphthalene	Body Weight	8E-06	--	2E-06	8E-06		
			Pentachlorophenol	5E-10	--	4E-10	9E-10	Pentachlorophenol	Kidney	9E-06	--	8E-06	2E-05		
			Dioxin TEQ	8E-07	--	8E-08	9E-07	Dioxin TEQ	N/A	N/A	--	N/A	N/A		
			Arsenic	5E-05	--	6E-09	6E-05	Arsenic	Skin	8E-03	--	8E-04	9E-03		
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	1E-04	--	4E-05	2E-04		
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	1E-02	--	--	1E-02		
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	4E-03	--	--	4E-03		
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	1E-03	--	--	1E-03		
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	1E-02	--	--	1E-02		
(total)			9E-07	--	1E-07	1E-06	(Total)			4E-02	--	8E-04	4E-02		
Surface Water	Surface Water	Lagoon 4	Dioxin TEQ	--	--	3E-09	3E-09	Dioxin TEQ	N/A	--	--	N/A	N/A		
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	1E-02	1E-02		
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	8E-05	8E-05		
			(total)			--	--	3E-09	3E-09	(Total)			--	--	1E-02
Soil/ Groundwater	Air	Lagoons (1 through 5)	1,2-Dichlorobenzene	--	N/A	--	N/A	1,2-Dichlorobenzene	NOAEL	--	N/A	--	N/A		
			1,2-Dichloroethane	--	2E-10	--	2E-10	1,2-Dichloroethane	N/A	--	N/A	--	N/A		
			1,3-Dichlorobenzene	--	N/A	--	N/A	1,3-Dichlorobenzene	N/A	--	N/A	--	N/A		
			1,4-Dichlorobenzene	--	N/A	--	N/A	1,4-Dichlorobenzene	N/A	--	2E-06	--	2E-06		
			Benzene	--	6E-11	--	6E-11	Benzene	N/A	--	N/A	--	N/A		
			Bromodichloromethane	--	N/A	--	N/A	Bromodichloromethane	Kidney	--	N/A	--	N/A		
			Carbon tetrachloride	--	9E-10	--	9E-10	Carbon tetrachloride	Liver	--	N/A	--	N/A		
			Chlorobenzene	--	N/A	--	N/A	Chlorobenzene	Liver	--	N/A	--	N/A		
			Chloroform	--	1E-09	--	1E-09	Chloroform	Liver	--	N/A	--	N/A		
			Methylene chloride	--	8E-14	--	8E-14	Methylene chloride	Liver	--	N/A	--	N/A		
			Tetrachloroethylene	--	3E-11	--	3E-11	Tetrachloroethylene	Liver	--	N/A	--	N/A		
			Trichloroethene	--	5E-11	--	5E-11	Trichloroethene	N/A	--	N/A	--	N/A		
			Xylene (total)	--	N/A	--	N/A	Xylene (total)	Nervous System	--	N/A	--	N/A		
(total)			--	3E-09	--	3E-09	(Total)			--	2E-06	--	2E-06		
Total Risk Across Soil/Sludge							1E-06	Total Hazard Index Across All Media and All Exposure Routes							5E-02

-- = Not Evaluated
N/A = Not Applicable

Total Risk Across Soil/Sludge 1E-06
Total Risk Across Surface Water 3E-09
Total Risk Across Air 3E-09
Total Risk Across All Media and All Exposure Routes 1E-06

Total Hazard Index Across All Media and All Exposure Routes 5E-02

Total Skin HI = 9E-03
Total Nervous System HI = 2E-02
Total Immune System HI = 8E-05
Total Kidney HI = 2E-04
Total Blood HI = N/A
Total Growth HI = N/A
Total Liver HI = N/A

TABLE 9.56.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soils	Soil/Sludge	Lagoon 4	Benzo(a)anthracene	4E-10	--	2E-10	6E-10	Benzo(a)anthracene	N/A	N/A	--	N/A	N/A		
			Benzo(a)pyrene	4E-09	--	2E-09	6E-09	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A		
			Benzo(b)fluoranthene	4E-10	--	2E-10	6E-10	Benzo(b)fluoranthene	N/A	N/A	--	N/A	N/A		
			Dibenz(a,h)anthracene	4E-09	--	2E-09	6E-09	Dibenz(a,h)anthracene	N/A	N/A	--	N/A	N/A		
			Indeno(1,2,3-cd)pyrene	4E-10	--	2E-10	6E-10	Indeno(1,2,3-cd)pyrene	N/A	N/A	--	N/A	N/A		
			Naphthalene	N/A	--	N/A	N/A	Naphthalene	Body Weight	2E-08	--	6E-07	3E-06		
			Pentachlorophenol	2E-10	--	1E-10	3E-10	Pentachlorophenol	Kidney	3E-08	--	3E-06	6E-06		
			Dioxin TEQ	5E-08	--	5E-08	6E-08	Dioxin TEQ	N/A	N/A	--	N/A	N/A		
			Arsenic	2E-08	--	2E-08	2E-08	Arsenic	Skin	3E-03	--	3E-04	3E-03		
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	4E-05	--	1E-05	5E-05		
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	4E-03	--	--	4E-03		
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	1E-03	--	--	1E-03		
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	4E-04	--	--	4E-04		
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	5E-03	--	--	5E-03		
(Total)				6E-08	--	1E-08	6E-08	(Total)		1E-02	--	3E-04	1E-02		
Surface Water	Surface Water	Lagoon 4	Dioxin TEQ	--	--	6E-10	6E-10	Dioxin TEQ	N/A	--	--	N/A	N/A		
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	7E-04	7E-04		
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	7E-06	7E-06		
			(Total)	--	--	6E-10	6E-10	(Total)		--	--	7E-04	7E-04		
Soil/ Groundwater	Air	Lagoons (1 through 5)	1,2-Dichlorobenzene	--	N/A	--	N/A	1,2-Dichlorobenzene	NOAEL	--	N/A	--	N/A		
			1,2-Dichloroethane	--	6E-11	--	6E-11	1,2-Dichloroethane	N/A	--	N/A	--	N/A		
			1,3-Dichlorobenzene	--	N/A	--	N/A	1,3-Dichlorobenzene	N/A	--	N/A	--	N/A		
			1,4-Dichlorobenzene	--	N/A	--	N/A	1,4-Dichlorobenzene	N/A	--	7E-07	--	7E-07		
			Benzene	--	2E-11	--	2E-11	Benzene	N/A	--	N/A	--	N/A		
			Bromodichloromethane	--	N/A	--	N/A	Bromodichloromethane	Kidney	--	N/A	--	N/A		
			Carbon tetrachloride	--	3E-10	--	3E-10	Carbon tetrachloride	Liver	--	N/A	--	N/A		
			Chlorobenzene	--	N/A	--	N/A	Chlorobenzene	Liver	--	N/A	--	N/A		
			Chloroform	--	5E-10	--	5E-10	Chloroform	Liver	--	N/A	--	N/A		
			Methylene chloride	--	3E-14	--	3E-14	Methylene chloride	Liver	--	N/A	--	N/A		
			Tetrachloroethylene	--	9E-12	--	9E-12	Tetrachloroethylene	Liver	--	N/A	--	N/A		
			Trichloroethene	--	2E-11	--	2E-11	Trichloroethene	N/A	--	N/A	--	N/A		
			Xylene (Total)	--	N/A	--	N/A	Xylene (Total)	Nervous System	--	N/A	--	N/A		
			(Total)				--	9E-10	--	9E-10	(Total)		--	7E-07	--
Total Risk Across Soil/Sludge							9E-08	Total Hazard Index Across All Media and All Exposure Routes							1E-02

-- = Not Evaluated
N/A = Not Applicable

Total Risk Across Surface Water
Total Risk Across Air
Total Risk Across All Media and All Exposure Routes

9E-08
6E-10
9E-10
9E-08

Total Skin HI =
Total Nervous System HI =
Total Immune System HI =
Total Kidney HI =
Total Blood HI =
Total Growth HI =
Total Liver HI =

3E-03
2E-03
7E-06
6E-05
N/A
N/A
N/A

Table 9.57.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

PONNAL TANNERY

Scenario Timeframe: Future
Receptor Population: Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soils	Soil/Sludge	Lagoon 5	Benz(a)pyrene	2E-06	--	7E-09	2E-06	Benz(a)pyrene	N/A	N/A	--	N/A	N/A		
			bis(2-Chloroethoxy)methane	N/A	--	--	N/A	bis(2-Chloroethoxy)methane	N/A	N/A	--	--	N/A		
			Bis(2-chloroethyl)ether	3E-09	--	--	3E-09	Bis(2-chloroethyl)ether	N/A	N/A	--	--	N/A		
			N-Nitroso-di-n-propylamine	3E-06	--	--	3E-06	N-Nitroso-di-n-propylamine	N/A	N/A	--	--	N/A		
			Nitrobenzene	N/A	--	--	N/A	Nitrobenzene	Blood	2E-04	--	--	2E-04		
			Penitochlorophenol	5E-10	--	4E-10	1E-09	Penitochlorophenol	Kidney	1E-05	--	9E-06	2E-05		
			Avodor 1248	9E-10	--	4E-10	1E-09	Avodor 1248	Immune System	2E-03	--	7E-04	2E-03		
			Dioxin TEQ	2E-06	--	2E-07	2E-06	Dioxin TEQ	N/A	N/A	--	N/A	N/A		
			Antimony	N/A	--	--	N/A	Antimony	Blood	1E-02	--	--	1E-02		
			Arsenic	6E-06	--	5E-09	6E-06	Arsenic	Skin	9E-03	--	9E-04	9E-03		
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	5E-03	--	2E-03	7E-03		
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	1E+00	--	--	1E+00		
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	8E-03	--	--	8E-03		
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	2E-02	--	--	2E-02		
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	8E-02	--	--	8E-02		
(Total)				2E-06	--	2E-07	2E-06	(Total)				2E+00	--	3E-03	2E+00
Surface Water	Surface Water	Lagoon 5	Dioxin TEQ	--	--	2E-08	2E-08	Dioxin TEQ	N/A	--	--	N/A	N/A		
			Chromium	--	--	N/A	N/A	Chromium	NOAEL	--	--	1E-05	1E-05		
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	2E-03	2E-03		
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	9E-05	9E-05		
			(Total)				--	--	2E-08	2E-08	(Total)				--
Soil/ Groundwater	Air	agoons (1 through	1,2-Dichlorobenzene	--	N/A	--	N/A	1,2-Dichlorobenzene	NOAEL	--	N/A	--	N/A		
			1,2-Dichloroethane	--	2E-10	--	2E-10	1,2-Dichloroethane	N/A	--	N/A	--	N/A		
			1,3-Dichlorobenzene	--	N/A	--	N/A	1,3-Dichlorobenzene	N/A	--	N/A	--	N/A		
			1,4-Dichlorobenzene	--	N/A	--	N/A	1,4-Dichlorobenzene	N/A	--	2E-06	--	2E-06		
			Benzene	--	6E-11	--	6E-11	Benzene	N/A	--	N/A	--	N/A		
			Bromodichloromethane	--	N/A	--	N/A	Bromodichloromethane	Kidney	--	N/A	--	N/A		
			Carbon tetrachloride	--	9E-10	--	9E-10	Carbon tetrachloride	Liver	--	N/A	--	N/A		
			Chlorobenzene	--	N/A	--	N/A	Chlorobenzene	Liver	--	N/A	--	N/A		
			Chloroform	--	1E-09	--	1E-09	Chloroform	Liver	--	N/A	--	N/A		
			Methylene chloride	--	8E-14	--	8E-14	Methylene chloride	Liver	--	N/A	--	N/A		
			Tetrachloroethylene	--	3E-11	--	3E-11	Tetrachloroethylene	Liver	--	N/A	--	N/A		
			Trichloroethene	--	5E-11	--	5E-11	Trichloroethene	N/A	--	N/A	--	N/A		
			Xylene (Total)	--	N/A	--	N/A	Xylene (Total)	Nervous System	--	N/A	--	N/A		
			(Total)				--	3E-09	--	3E-09	(Total)				--
Total Risk Across Soil/Sludge						2E-06	Total Hazard Index Across All Media and All Exposure Routes						2E+00		

-- = Not Evaluated
N/A = Not Applicable

Total Risk Across Soil/Sludge = 2E-06
Total Risk Across Surface Water = 2E-08
Total Risk Across Air = 3E-09
Total Risk Across All Media and All Exposure Routes = 2E-06

Total Hazard Index Across All Media and All Exposure Routes = 2E+00

Total Skin HI = 9E-03
Total Nervous System HI = 3E-02
Total Immune System HI = 2E-03
Total Kidney HI = 7E-03
Total Blood HI = 1E-02
Total Growth HI = N/A
Total Liver HI = N/A

TABLE 9.57.CT
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY

POWNA TANNERY

Scenario Timeframe: Future
Receptor Population: Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient						
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soils	Soil/Sludge	Lagoon 5	Benzo(a)pyrene	4E-09	--	2E-09	6E-09	Benzo(a)pyrene	N/A	N/A	--	N/A	N/A		
			bis(2-Chloroethoxy)methane	N/A	--	--	N/A	bis(2-Chloroethoxy)methane	N/A	N/A	--	--	N/A		
			Bis(2-chloroethoxy)ether	7E-10	--	--	7E-10	Bis(2-chloroethoxy)ether	N/A	N/A	--	--	N/A		
			N-Nitroso-di-n-propylamine	5E-09	--	--	5E-09	N-Nitroso-di-n-propylamine	N/A	N/A	--	--	N/A		
			Nitrobenzene	N/A	--	--	N/A	Nitrobenzene	Blood	8E-05	--	--	8E-05		
			Pentachlorophenol	2E-10	--	1E-10	3E-10	Pentachlorophenol	Kidney	4E-06	--	3E-06	6E-06		
			Aroclor 1248	3E-10	--	1E-10	4E-10	Aroclor 1248	Immune System	5E-04	--	2E-04	8E-04		
			Dioxin TEQ	7E-07	--	7E-08	8E-07	Dioxin TEQ	N/A	N/A	--	N/A	N/A		
			Antimony	N/A	--	--	N/A	Antimony	Blood	3E-03	--	--	3E-03		
			Arsenic	8E-09	--	8E-10	9E-09	Arsenic	Skin	1E-03	--	1E-04	1E-03		
			Cadmium	N/A	--	N/A	N/A	Cadmium	Kidney	2E-03	--	8E-04	2E-03		
			Chromium	N/A	--	--	N/A	Chromium	NOAEL	5E-01	--	--	5E-01		
			Manganese	N/A	--	--	N/A	Manganese	Nervous System	3E-03	--	--	3E-03		
			Mercury	N/A	--	--	N/A	Mercury	Nervous System	3E-03	--	--	3E-03		
			Thallium	N/A	--	--	N/A	Thallium	NOAEL	3E-02	--	--	3E-02		
(Total)				7E-07	--	7E-08	8E-07	(Total)				5E-01	--	9E-04	5E-01
Surface Water	Surface Water	Lagoon 5	Dioxin TEQ	--	--	6E-09	6E-09	Dioxin TEQ	N/A	--	--	N/A	N/A		
			Chromium	--	--	N/A	N/A	Chromium	NOAEL	--	--	2E-06	2E-06		
			Manganese	--	--	N/A	N/A	Manganese	Nervous System	--	--	4E-04	4E-04		
			Mercury	--	--	N/A	N/A	Mercury	Immune System	--	--	1E-05	1E-05		
			(Total)				--	--	6E-09	6E-09	(Total)				--
Soil/Groundwater	Air	Lagoons 1 through 5	1,2-Dichlorobenzene	--	N/A	--	N/A	1,2-Dichlorobenzene	NOAEL	--	N/A	--	N/A		
			1,2-Dichloroethane	--	6E-11	--	6E-11	1,2-Dichloroethane	N/A	--	N/A	--	N/A		
			1,3-Dichlorobenzene	--	N/A	--	N/A	1,3-Dichlorobenzene	N/A	--	N/A	--	N/A		
			1,4-Dichlorobenzene	--	N/A	--	N/A	1,4-Dichlorobenzene	N/A	--	7E-07	--	7E-07		
			Benzene	--	2E-11	--	2E-11	Benzene	N/A	--	N/A	--	N/A		
			Bromodichloromethane	--	N/A	--	N/A	Bromodichloromethane	Kidney	--	N/A	--	N/A		
			Carbon tetrachloride	--	3E-10	--	3E-10	Carbon tetrachloride	Liver	--	N/A	--	N/A		
			Chlorobenzene	--	N/A	--	N/A	Chlorobenzene	Liver	--	N/A	--	N/A		
			Chloroform	--	5E-10	--	5E-10	Chloroform	Liver	--	N/A	--	N/A		
			Methylene chloride	--	3E-14	--	3E-14	Methylene chloride	Liver	--	N/A	--	N/A		
			Tetrachloroethylene	--	9E-12	--	9E-12	Tetrachloroethylene	Liver	--	N/A	--	N/A		
			Trichloroethene	--	2E-11	--	2E-11	Trichloroethene	N/A	--	N/A	--	N/A		
			Xylene (Total)	--	N/A	--	N/A	Xylene (Total)	Nervous System	--	N/A	--	N/A		
			(Total)				--	9E-10	--	9E-10	(Total)				--
Total Risk Across Soil/Sludge							8E-07	Total Hazard Index Across All Media and All Exposure Routes							5E-01

-- = Not Evaluated

N/A = Not Applicable

Total Risk Across Soil/Sludge	8E-07
Total Risk Across Surface Water	6E-09
Total Risk Across Air	9E-10
Total Risk Across All Media and All Exposure Routes	8E-07

Total Hazard Index Across All Media and All Exposure Routes

Total Skin HI =	1E-03
Total Nervous System HI =	8E-03
Total Immune System HI =	8E-04
Total Kidney HI =	2E-03
Total Blood HI =	4E-03
Total Growth HI =	N/A
Total Liver HI =	N/A